

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
15 February 2001 (15.02.2001)

PCT

(10) International Publication Number  
**WO 01/11519 A2**

(51) International Patent Classification<sup>7</sup>: G06F 17/60

(21) International Application Number: PCT/US00/21159

(22) International Filing Date: 2 August 2000 (02.08.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
09/369,769 6 August 1999 (06.08.1999) US

(71) Applicant: RESPOND.COM [US/US]; 3290 West  
Bayshore Road, Palo Alto, CA 94303-4043 (US).

(72) Inventors: CLEMENS, William; 28030 Moody Road,  
Los Altos Hills, CA 94022 (US). RAMACHANDRAN,  
Sriram; 1219 McIntosh Avenue, Sunnyvale, CA 94087  
(US). KENT, Linda; 7378 Village Square Drive, West  
Bloomfield, MI 48322 (US).

(74) Agents: GLENN, Michael, A. et al.; Glenn Patent Group,  
Suite L, 3475 Edison Way, Menlo Park, CA 94025 (US).

(81) Designated States (*national*): AL, AM, AT, AU, AZ, BA,  
BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES,  
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG,  
MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,  
SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU,  
ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,  
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— Without international search report and to be republished  
upon receipt of that report.

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: COMPUTER-IMPLEMENTED SYSTEM AND METHOD FOR INDUCING TARGETED SELLER OFFERS TO ANONYMOUS BUYERS

(57) Abstract: The invention provides a network-based buyer-driven system and method for inducing and creating targeted offers from sellers to anonymous buyers. A buyer accesses a home page displayed by the system server. The home page provides top level access to a tree-shaped hierarchical descriptor structure whose main trunk includes broad categorical descriptors for businesses or items of interest to a buyer. As a buyer rises along he limbs and branches of the tree, the buyer is presented with more and more detailed descriptive and categorical information until the or she has narrowed the search sufficiently to reach a specific leaf, containing a plurality of data fields which may substantially describe the item which the buyer wishes to purchase. The buyer fills in the data fields. The data is then submitted as an inquiry to the system server. A software operations module extracts the buyer's identifying information to maintain anonymity, assigns a unique tracking number to the remaining information and forwards an anonymous inquiry to interested sellers via an e-mail message or fax. Any interested seller may then provide a further expression of interest by replying to the anonymous e-mail message, which is then transmitted back to the system server. The software operations module then matches the unique tracking number of the received e-mail message with the identity of the interested buyer and causes an e-mail message containing seller information to be sent to the interested buyer. The buyer may then browse the information provided by the interested seller and elect to contact the seller for further negotiations of price, specifications, terms or conditions.



WO 01/11519 A2

16/PRTS

# COMPUTER-IMPLEMENTED SYSTEM AND METHOD FOR INDUCING TARGETED SELLER OFFERS TO ANONYMOUS BUYERS

## BACKGROUND OF THE INVENTION

5

### TECHNICAL FIELD

This invention relates to a computer-implemented system and method for generating detailed purchase inquiries to anonymously propagate responsive offers from sellers. More particularly, the invention relates to such a system and method implemented over a global communications network.

### DESCRIPTION OF THE PRIOR ART

15 The prior art is replete with methods and systems for inducing transactions between buyers and sellers using computers or other telecommunication technology, such as, telephones, fax machines, and televisions.

20 Television-based systems were arguably the pre-cursors to the current suite of web-based buy/sell systems. Television buy/sell systems, such as the HOME SHOPPING NETWORK, provide a catalogue or classified ad type of selling system where a potential buyer must watch the particular show or channel until an item is displayed that is of interest. These television-based systems do not increase the buyer's efficiency in finding a desired item. Instead, they are used to entice the viewer to buy something that they may have never  
25 considered needing in the first place. Television-based systems act as hybrid marketing vehicles, providing both entertainment and a seller-driven marketing conduit. Buyers cannot specify what they wish to buy; they are limited to purchasing those items displayed on the television screen.

30 Other versions of the HOME SHOPPING NETWORK increased the entertainment aspect by including an auction format to create more of a gamelike interaction with the viewer. Again, this system was intended to motivate the viewer to buy something, whether the viewer really needed or wanted the particular product at the outset.

## 2

The Internet and its progeny, the WorldWide Web ("WWW"), have been quick to adapt similar marketing schemes, although communicated using the newer computer-based medium and an associated global communications network. These web-based marketing vehicles depend on the use of a transaction consummation system, known as electronic commerce, or, "e-commerce."

E-commerce is the means by which a buy/sell transaction is accomplished over the WWW. A buyer provides credit card information to a seller through a form displayed on a page of the seller's web site. The information is then extracted from the form and presented to an e-commerce software system, which is resident on the seller's web server. The e-commerce software arranges for the appropriate amounts to be charged to the buyer's credit card and an equivalent electronic payment to be made to the seller. E-commerce" has become a ubiquitous mainstay associated with the implementation of commercial web sites on the WWW. However, in reality, e-commerce is the equivalent of using one's credit card over the telephone to buy a product from the HOME SHOPPING NETWORK.

Deployment of an e-commerce based web site on the WWW is now generally considered a viable, complementary, and somewhat essential sale and marketing vehicle. Despite the broad deployment of these selling web sites, there continues to be a lack of consumer confidence in the e-commerce systems in use today. Many consumers still do not trust that a transaction may be consummated online without disclosing the consumer's confidential financial and credit information to other inappropriate parties.

Generally, e-commerce web sites tend to be modeled after predecessor non-electronic marketing and sales systems including catalogues, auctions, classified ads and yellow pages. For example, many e-commerce-based web sites have been primarily directed to listing and selling those items which are easily classified and catalogued, such as, automobiles, books, music CD's, clothing, shoes, and others. One example of such a website is Amazon.com, at the URL <http://www.amazon.com>. Amazon.com is well known for its extensive online catalogue of books. This is driven, in part, by the need to provide a standard set of product descriptors which might be easily programmed into a database from which information is subsequently extracted for presentation via a web page interface. As a result, many items, which cannot be easily described, do not as readily lend themselves to inclusion in a

structured database from which their information could be easily extracted and categorized for presentation to a potential buyer. In particular, where a buyer is interested in the provision of both a product and associated services, current e-commerce web sites are incapable of accurately communicating accurate and targeted inquiries and offers between buyers and sellers.

Several e-commerce-based web sites are directed to an auction format, allowing buyers to post online bids for a particular product for a specific period of time. An example of such an auction format web site is EBAY, at the URL, <http://www.ebay.com>. Additionally, PRICELINE, at the URL, <http://priceline.com>, is a slightly different type of auction-format web site, except that potential buyers may only bid one price for a product before purchase. This format is commonly known as a Dutch auction and has existed for centuries. Both sites are seller-driven, providing a means by which sellers can expose more products to a greater number of buyers.

Additionally, other e-commerce-based web sites provide limited categorical product interfaces to a consumer. Many use a "Yellow Pages" format providing broad categorical interfaces where the categories are only alphabetically related. The categories may be selected with the click of a mouse and the consumer is then directed to one or more business web sites linked to that particular category. Once again, the consumer is browsing a seller-driven site. These sites provide the consumer with little opportunity to provide detailed information to minimize "dead ends" where the desired item cannot be located. Examples of this type e-commerce model include SHOPNOW, having the URL, <http://www.shopnow.com>, BUYERWEB, having the URL, <http://www.buyer.com>, and WP YELLOW PAGES, having the URL <http://www.washingtonpost.com/wp-srv/yp>.

Irrespective of the particular buy/sell web site model presented to a potential buyer, all the sites rely on the common feature of providing online consummation of a transaction using purportedly secure e-commerce systems. As earlier indicated, online e-commerce is still interpreted by a large sector of the buying populace as too risky for their participation. Consequently, existing on-line e-commerce web sites fail to attract the interest and participation of these e-commerce wary consumers. Hence, a large volume of commerce, which might otherwise be successfully transacted via e-commerce, continues to follow the

time-tested norms of business commerce, using tangible searches to identify products of interest and tangible hard-copy documents to consummate the financial transactions.

Therefore, these particular consumers and businesses are unable to efficiently buy and sell many products and services. Despite the failure of e-commerce to attract this sector of the buying populace, as evidenced by the prior art described herein, industry continues to look to the design and development of a more robust and secure e-commerce system to attempt to attract this buying sector. Much of the prior art that emphasizes the provision of a new method and system to accomplish online e-commerce is typically, necessarily tied to an underlying web-base buy/sell model. Hence, although the prior art described below may emphasize a transactional method, an encryption method, a product or index organizational structure, or other transactional or structural features of a particular buy/sell model, review of those systems and methods is indicative of industry's failure to teach toward a novel solution such as that taught by the present invention described herein.

For example, Walker *et al. Method and Apparatus for a Cryptographically Assisted Commercial Network System Designed to Facilitate Buyer-Driven Conditional Purchase Offers*, U. S. Patent No. 5,794,207 (August 11, 1998) teaches a system where potential buyers must agree to be legally bound to a conforming response from a seller, before actually knowing all the specifics of a seller's response. This patent reflects the online implementation of what is commonly known as a Dutch auction format. The requirement that the buyer be prepared to contractually bind itself to any offer which matches his specified criteria forces the anticipatory buyer to provide maximum description of the item which he is interested in purchasing. Where Walker's system does not accommodate a detailed description, the buyer is still legally obligated to accept a product that may not actually meet his or her specific requirements.

Additionally, although Walker's system may prove adequate to sell items which are easily and confidently described, it still deters a substantial portion of the buying populace from seeking to buy items via the Internet due to the legally-binding contractual commitment. Walker's system inherently precludes any negotiation whatsoever between the buyer and seller.

5

Additionally, as with the greatest number of other web site selling systems, Walker's system hinges on the use of e-commerce for each buy/sell transaction. Without e-commerce, Walker's system would not be operable, since a fundamental requirement is the ability to immediately bind the bidder when accepted by a seller. Consequently, that portion of the buying populace which might benefit from Walker's system, but still distrusts the e-commerce approach, is also chilled from its use. Additionally, in Walker's invention, price is non-negotiable once a prospective buyer has submitted his offer to purchase to a central controller for transmission to prospective sellers. This feature will chill those who prefer to interact with some level of negotiation to also forego purchases on the Internet through a system such as that described by Walker.

Several other buy/sell protocols are described in the prior art where the key feature of each is the software's ability to encrypt e-commerce information before transmittal across an electronic network, such as the Internet.

For example, Sirbu *et al.* *Method and Apparatus for Purchasing and Delivering Digital Goods Over a Network*, U.S. Patent No. 5,809,144 (September 15, 1998), teaches an invention for accomplishing transactions over a network using an encryption method. However, Sirbu's method is designed to sell digital goods, such as software, video or music. Sirbu's method and apparatus does not accommodate or facilitate the identification and sale of complex, difficult to describe or hard to find goods or services.

Lupien *et al.* *Crossing Network Utilizing Optimal Mutual Satisfaction Density Profile*, U.S. Patent No. 5,689,653 (November 18, 1997) describes a buy/sell matching system for the stock exchange industry where the invention is directed to creating indicators to determine when a transaction should be consummated. Lupien's system is directed to simple stock transactions. Lupien's system would not accommodate transactions where the item to be exchanged requires a plurality of descriptors, as opposed to a basic stock exchange descriptor code.

Micali, *Traceable Anonymous Transactions*, U.S. Patent No. 5,812,679 (September 22, 1988) describes an e-commerce system that maintains the anonymity of the parties to the transaction, but still allows a party to be traced under certain circumstances. The fundamental feature of Micali's invention is an anonymous communications channel

deployed between a sender and a recipient. The anonymous communications channel requires encryption of a message before transmittal to a recipient.

In an earlier patent, U.S. Patent No. 5,615,269, *Ideal Electronic Negotiations*, (March 25, 1997) Micali describes a method for enabling an electronic transaction between two parties using a plurality of intermediate trustees to effect the transaction when conditions are appropriate. When a first party's selling reservation price has a predetermined relationship to a second party's buying reservation price, such as equality, the trustees may commit the first and second party to a consummated transaction. In many ways, Micali's invention describes a system somewhat analogous to that taught by Walker *et al.* *Method and Apparatus for a Cryptographically Assisted Commercial Network System Designed to Facilitate Buyer-Driven Conditional Purchase Offers*, U. S. Patent No. 5,794,207 (August 11, 1998) described earlier in this application. However, Micali's system is primarily directed to stock transactions, whereas, Walker describes a similar system applied to transactions involving slightly more complex items of exchange, such as, hotel rooms, plane tickets, car rentals, etc. Both rely on e-commerce and are directed to easily described products.

A more recent patent, Mori, *et al.* *Electronic Transaction Method and System*, U.S. Patent No. 5,880,446 (March 9, 1999) describes a triad system including: a purchase-side client, an offer-side client and a settlement-side client. These three clients communicate across a computer network in a manner to provide security, anonymity and authentication during the execution of an electronic transaction while reducing the number of attendant software applications required to support the electronic transaction. This system also closely parallels the system described by Walker *et al.*, above, but is more directed to maintaining the security of a transaction as opposed to supporting the delivery of a willing buyer's offer to a willing seller and securing a legally-binding transaction. Additionally, Mori's settlement side client is analogous to a trustee described in Micali (U.S. Patent No. 5,615,269) described above.

Another recent patent issued to Woolston, Thomas G., *Consignment Nodes*, U. S. Patent No. 5,845,265 (December 1, 1998) describes a method and apparatus for creating a computerized market for used and collectible goods. As with Walker (U.S. Patent No. 5,794,207), Micali (U.S. Patent No. 5,615,269) and Mori (U.S. Patent No. 5,880,446), described above, Woolston's system requires a third party to act as a bailee of the goods beings sold to evoke the trust and confidence of the parties participating in a transaction. Additionally,

Woolston's system creates an online catalogue of goods through which a prospective buyer may browse to attempt to find a product of interest. Consequently, Woolston's system is unnecessarily cumbersome, where a prospective buyer knows specifically what item he or she is currently interested in purchasing.

5

Other relevant encryption-based e-commerce systems include Muftic, *Secure World Wide Electronic Commerce Over An Open Network*, U. S. Patent No. 5,850,442, (December 15, 1998). Muftic teaches a system that requires the use of a public encryption/decryption key as well as smart tokens to securely conduct the electronic business transactions. Muftic teaches  
10 a system that is once again directed to implementation of e-commerce, not provision of a system method to ease buyer's ability to locate sellers having complex, difficult to describe, or hard to find products or services.

Klingman, *Secure System for Electronic Selling*, U.S. Patent No. 5,799,285, (August 25,  
15 1998) teaches a telephony-based system to allow small sellers to compete effectively by selling their wares or services over the Internet and providing authentication and legitimacy of the sale to the buyer before the transaction is consummated. Klingman's system is dependent on the presence of existing Internet distributors that simply act as authenticating conduits of products or services to buyers on the Internet. Klingman's system is seller-driven  
20 and creates a catalogue structure for presentation to a buyer on the Internet, causing the potential buyer to spend substantial time searching for a desired item on the distributor's Internet or WorldWide Web site. As described, Klingman's system would not enhance a buyer's ability to locate a non-simplistic product or service. Instead, Klingman's system would place a buyer in a potentially confusing morass of non-homogenous catalogue-based  
25 web sites. Although intended to increase sales by a small seller by providing authentication, a buyer is less likely to spend sufficient time to arrive at a purchase point where Klingman's invention could prove helpful.

Lalonde, *et al.*, *Computer-based Classified Ad System and Method*, U.S. Patent No.  
30 5,283,731, (February 1, 1994) teaches a method for matching sellers with buyers, by hosting the classified ads on a computer. In Lalonde's system, data for classified ads is contributed via a voice interface, e.g., a telephone. The classified ad online model is nearly as inefficient as its paper counterpart, requiring repetitious review and perusal of the voluminous listing of advertised products or service. By its fundamental nature, a classified ad system is seller



driven. Although "want ads" or "wanted to buy" ads are buyer driven, their sequential, unstructured presentation causes potential sellers to spend excessive amounts of time searching the listings to hopefully identify an ad to which they might be able to respond. Hence, unless one tends to enjoy continually reading classified ads, they do not provide an efficient sales or purchase medium for sellers or buyers. Classified ads attribute their success primarily to the broad distribution to a large sector of the population.

Bixler, *et al*, *Electronic Classified Advertising Interface Method and Instructions with Continuous Search Notification*, U.S. Patent No. 5,745,882, (April 28, 1998) describes a similar classified ad system which is interacted with via the telephone as opposed to over the Internet or some other type of computer network. However, the buyer is able to list a limited number of criteria for the system to use in filtering the existing database of classified ads before presentation to the buyer. Additionally, Bixler's system is designed to provide automatic notification if any item added later meets the criteria selected by the buyer. However, Bixler's system is not adaptable to accommodate identification of sellers having non-simplistic products or services.

Fraser, *Interactive Computer System to Match Buyers and Sellers Of Real Estate, Businesses and Other Property Using the Internet*, U.S. Patent No. 5,664,115. (September 2, 1999) describes an online buyer/seller matching system where the system software screens a buyer based upon certain criteria and only transmits those offers to a seller which have met those criteria. Fraser's system maintains the confidentiality only of the seller's identification information, not the buyer's. Further, a buyer is forced to browse through a catalogue of items for sale, rather than simply being able to describe the specific characteristics of an item that is of interest to the buyer. Consequently, the buyer's purchase may be chilled by the pure monotony of having to pore over a substantial number of product records before finding the article of truest interest.

In addition to those inventions taught in the patents listed above, a plurality of other Internet-based selling systems have been deployed on the WWW over the last few years. These systems may not have been the subject of a patent application or grant, but are relevant to the current application and provide evidence of previous attempts to address a need that has heretofore not been addressed. Examples of these Internet-based selling systems, which are

discussed further below, include SHOPNOW, BUYERWEB, CARPOINT, AMERICA'S HOME IMPROVEMENT NETWORK, EBAY, and E\*TRADE.

SHOPNOW, located at the URL, <http://www.shopnow.com>, provides a simple catalogue of categories from which a buyer may select to eventually locate a catalogue of products that are considered within the particular category. SHOPNOW is a seller driven site that depends on e-commerce transactions.

BUYERWEB, located at the URL, <http://www.buyer.com>, provides an online selling system that also presents a few basic categories on its home page, which may be selected by a potential buyer visiting the web site. Currently, those categories include wine and cigars, entertainment and travel, and collectibles. A potential buyer accesses the BUYERWEB home page to view the available basic product categories. After selecting a desired category, the potential buyer completes a form describing the product of interest. The form includes various fields with drop-down menus from which the buyer may select to describe the product of interest. Once the potential buyer has completed the form, the buyer submits the form to the BUYERWEB server.

The BUYERWEB server then purportedly deploys intelligent search technology to match the buyer's request with businesses that sell the item. Actually, the BUYERWEB system is simply matching the potential buyer's request with those sellers who previously indicated that they would like to view any solicitation associated with specific product categories. Once the businesses have been identified, they are notified by email of the buyer's need for a particular product or service. The business merchant may then respond to the email inquiry upon payment of a nominal fee for the particular lead. The potential buyer's identity and information need not be maintained as confidential information.

The BUYERWEB system does not include an efficient adaptive method or descriptive structure to allow a buyer to thoroughly describe the desired product of interest. BUYERWEB is a seller-driven system. If a business has not registered with the BUYERWEB system, those product categories will not be listed on the BUYERWEB site.

CARPOINT, located at the URL, <http://www.carpaint.com>, allows a potential buyer to select the make and model of a desired vehicle, along with a particular category, such as passenger

car, luxury car, sport utility vehicle and others. CARPOINT then performs a search to identify retailers that might have the desired car in inventory. The buyer may then elect to negotiate with a particular retailer to reduce the purchase price of the vehicle. CARPOINT also provides an alternative option for a prospective buyer to obtain an online price quote.

5 The CARPOINT model is limited to vehicle sales, where various features and options may be easily contained within a standard database for search and extraction. However, the CARPOINT system is designed to attract and generate revenue from the business of participating sellers, not buyers. CARPOINT is a seller-driven system. CARPOINT does not accommodate non-simplistic or diverse products or services.

10

AMERICA'S HOME IMPROVEMENT NETWORK, located at the URL, <http://www.improvenet.com>, presents a browser/buyer with a web page having various options which may be selected by the browser/buyer to perform such tasks as find a contractor, find a designer or find other items related to home improvement or remodeling.

15 Unfortunately, the site requires the browser/buyer to search a database of potentially appropriate contractors, rather than allowing the browser/buyer to describe their project and to have interested contractors respond with a bid to perform the desired work. Additionally, other items listed on this site are provided in a common catalogue format, which must once again be browsed by the prospective buyer. Again, this is a seller-driven system, which  
20 forces the prospective buyer to spend his or her time searching for a desired item, rather than having a seller provide a targeted response to his or her specific needs.

EBAY, located at the URL, <http://www.ebay.com>, is another popular type of Internet-based system for matching buyers with sellers of products. A prospective buyer selects from a  
25 number of categories listed on the EBAY web page to eventually browse through a catalogue of items that have been listed within the category by a plurality of sellers. Also, EBAY includes an auction format where the interested buyer may submit a bid to buy a particular item of interest that has been listed on the EBAY site. Again, EBAY is a seller-driven system. A potential buyer must continually and repeatedly browse the EBAY site and its  
30 various categories in the hope that a seller has elected to list the item that the buyer is interested in purchasing. Hence, an interested buyer will spend more of his or her time attempting to locate the product of interest.

11  
E\*TRADE, located at the URL, <http://www.etrade.com>, is a representative example of Internet-based selling sites where the product being sold is easily definable. E\*TRADE provides an Internet-based service for buying and selling company stocks and mutual funds. A system such as that presented by E\*TRADE would not accommodate the sale of products  
5 that require substantial definition. The only criteria used in effecting a transaction via E\*TRADE is establishing a particular purchase or sale price for the stock or other security of a particular company or mutual fund. E\*TRADE may be considered both a buyer and a seller-driven system, but is limited to trading in easily definable products.

10 Hence, despite the plethora of systems and methods developed over the past several years to facilitate online buy/sell transactions, many buy/sell opportunities still cannot be accommodated. Representative examples of circumstances which do not lend themselves readily to current web-based e-commerce systems such as those described above, include the following:

15  
1. "I am an office manager and need to open a new facility for 35 data entry clerks in the Richmond, VA area. I need chairs and desks that meet current OSHA standards and have moveable keyboard trays, and would like delivery services as well. We are planning on opening the office in 5 weeks."

20  
2. "I am a sports card dealer and would like a web site that lists my inventory by athlete, sport, year, and card company, offers secure transaction ordering, and can allow me to easily add digital images. Also, I would prefer if you can also host the site. I'm planning on spending \$25,000."

25  
3. "I own a gift shop in Rockport, MA with about \$250,000 in annual revenue, and need someone to prepare my books for tax season and help me with my filings. I have been using QUICKBOOKS."

30  
4. "I am looking for an original AM radio for a restoration project for a 1975 PORSCHE 914."

12

5. "I need a black Tunisian pearl for a setting in my wife's 1930 Tiffany broach. It should be 9 millimeters diameter, and I need it set in time for our 50th anniversary next Sunday."

5 6. "I am looking for rural property (no house) in Lassen County, California. I am looking for at least 40 mostly flat acres with a spring or year round stream, and would like it to be accessible by a state-maintained road."

10 The buyers in the examples above may spend time looking for potential sellers by searching the web and contacting each of them individually, or they might potentially call a plurality of shops, businesses or individuals, and describe repeatedly what they are looking for. The buyers would spend significant time on this exercise, and may discontinue their search after receiving a small number of positive responses, instead of continuing their exercise to search for the lowest potential prices.

15 Meanwhile, the sellers who are looking for new business opportunities are paying for placement on web sites and yellow page ads, building web sites, and, of course, answering the phone, all in the hopes of finding good sales leads. Sellers of many products and services spend significant time to generate many leads, and spend significant time filtering those leads for qualified prospects.

20 Therefore, for buyers and sellers of many goods and services, such as those six examples described above, doing business using existing e-commerce based web sites is much more inefficient and more expensive than it needs to be.

25 Accordingly, a need exists for a network-based buyer-driven product identification and purchase system capable of quickly and efficiently inducing and generating reliable targeted offers from competent sellers for presentation to pre-qualified interested buyers. Further, a need exists for such a system capable of providing sufficient descriptive flexibility to allow the buyers to ensure targeted offers sufficiently meet their purchase criteria before consummation of a purchase transaction. Still further, a need exists for such a system capable of adaptation and growth to accommodate continued refinement of a descriptive structure and associated individual descriptive terms. Additionally, a need exists for such a system where the buyers need not necessarily use e-commerce to consummate the financial

13

portion of a sale transaction. Lastly, a need exists for such a system and method that will minimize the amount of time a buyer must spend in searching for the desired product of interest. In other words, a need exists for such a system and method that is truly buyer-driven.

5

## SUMMARY OF THE INVENTION

The invention provides a network-based buyer-driven system and method for inducing and creating targeted offers from sellers to buyers while maintaining the buyer's anonymity prior to entering negotiations directed toward consummation of a transaction. The invention enables commerce in goods and services that are complex, difficult to describe or hard to find, whether the actual financial transaction between parties to a transaction may take place via the Internet or other means. The invention provides a novel and needed alternative to catalogue-based e-commerce systems by providing a robust, self-adapting hierarchical descriptor structure integrated with an intelligent, interactive description methodology.

The system provides a hierarchical descriptor structure and categories reflecting a tree, limb, branch and leaf metaphor. The first web site home page displayed to a buyer represents the trunk of the tree. The trunk presents a top level listing of categorical descriptors. Limbs and branches extending from the tree trunk represent various paths that a buyer may elect to take to further refine his or her product/service description. The limbs and branches reflect descriptors that are natural extensions of the categorical descriptions provided at the trunk. A buyer will rise through the tree limbs and branches until he or she finally reaches a leaf that represents the narrowest level of product description available in the system. The leaf is displayed to the buyer as a form containing one or more data fields. The buyer completes the data fields, including a tree format data entry field, where necessary to fully define a buyer's inquiry. Once the data fields are completed, the buyer submits the information to the system server by clicking on a button displayed on the same web page with the data fields.

Today, e-commerce is focused on helping people buy products that are easily catalogued and easily listed in database format. This represents only a small subset of all goods and services that are bought and sold by consumers and businesses. For everything else, buyers and sellers face the challenge of finding each other and determining if they can do business together.

The present invention will allow buyers and sellers in a wide array of commercial activities to quickly and efficiently find each other, communicate and do business. Buyers will benefit by having access to many potential sellers through a single search. Sellers will benefit by receiving detailed sales leads, without having to invest in an expensive online presence. The invention enables commerce across a wide array of products and services for consumers and businesses.

The invention enables commerce in goods and services that are complex, difficult to describe or hard to find by providing an adaptive hierarchical descriptor structure having a symbiotic relationship with an intuitive description methodology, where both the descriptor structure and the description methodology adapt and evolve through continued use by both sellers and buyers. The invention allows buyers to quickly yet anonymously locate many potential sellers, while simultaneously providing sellers with a simple, cost-effective mechanism for receiving sales leads.

Description of the markets served by the invention is useful to development of an understanding of the system to enhance enablement. Markets which are particularly well-served by the system and method of the invention, include:

- *Services in general:* Services require a buyer and seller (or provider) to communicate and discuss the buyer's needs. In addition, prices can vary widely and buyers will typically take the effort to talk with several potential sellers. The invention can allow buyers to submit their request once to multiple potential sellers, and wait for the sellers to respond, and bid, to them.
- *Business-to-Business Products:* Only easily catalogued business-related products are available through e-commerce today. The invention will allow businesses to easily and quickly search through substantial numbers of vendors for a hard-to-find item.
- *Hard to find Consumer Goods:* People looking for collectibles, used products, unique items and other hard to find goods can search the Internet or check auction sites, but these searches are time-consuming, do not allow for easy comparison shopping, and put the responsibility on the buyer to find the seller or the item. For example, if an item is not

available on an auction site, the buyer must keep checking back. The invention will allow the buyer to submit a form to potential sellers and wait for the stores to respond to him.

5 The system and method of the invention provides an Internet-based service, which is accessed through a web site. Via a web site interface page, commonly known as a home page, buyers of goods and services may submit anonymous inquiries to many potential sellers through a simple anonymous inquiry form. The system server software module causes a buyer's inquiry to be routed to a plurality of sellers as an email message. The buyer's identity  
10 is not revealed to the sellers. Sellers who are interested in filling the order immediately or continuing with further negotiations respond to the email. The system server software module causes the sellers email messages to be routed through the system server and back to the buyer. The buyer may then contact sellers directly for further negotiation or to consummate the transaction.

15

Unlike the prior art, the system and method of the invention need not provide for electronic consummation of the transactions. Additionally, the system and method of the invention need not position itself as a third party middleman or a broker to effect the consummation of a transaction between a buyer and a seller. Additionally, the system and method of the  
20 invention is the only true buyer-driven system of which the parties involved in preparation of this document are aware.

### BRIEF DESCRIPTION OF THE DRAWINGS

25 Figure 1 is a diagram of the component and modular structure of the system, according to the invention;

Figure 2 is a representative example of the telecommunication network associated with implementation of the system and method of the invention;

30

Figure 3 is a diagram of the system buyer interface associated with hierarchical descriptor structure, according to the invention;



14  
Figure 4 is a basic flowchart and block diagram illustrating the multiple descriptor levels of the hierarchical descriptor structure, according to the invention;

5 Figure 5 is a basic block diagram and flowchart of the three primary software modules of the system, according to the invention;

Figure 6 is a more detailed illustration of a portion of that flowchart shown in Figure 4, illustrating the steps prior to transmittal of an inquiry to a seller, according to the invention;

10 Figure 7 is a more detailed illustration of a portion of that flowchart shown in Figure 4, illustrating the steps after transmittal of an inquiry to a seller, according to the invention;

Figure 8 is a flowchart illustrating additional transaction processing features, according to the invention.

15 Figure 9 is a flowchart illustrating the steps of the adaptive intuitive descriptor structure and methodology, according to the invention;

20 Figure 10 is an illustration of the initial interface presented to a buyer, according to the invention.

Figure 11 is an illustration of a limb page in the hierarchical descriptor structure, according to the invention;

25 Figure 12 is an illustration of a branch page in the hierarchical descriptor structure, according to the invention;

Figure 13 is an example of a leaf inquiry form of the buyer hierarchical descriptor interface structure, according to the invention;

30 Figure 14 is an example of an email message delivered to a potential seller, according to the invention;

Figure 15 is an example of a seller registration page, according to the invention.

Figure 16 is an illustration of additional features integrated within the system software, according to the invention.

5

## DETAILED DESCRIPTION OF THE INVENTION

Referring to the drawings wherein like reference numerals represent like components throughout the various drawing figures, reference numeral 10 is directed to a preferred embodiment of a computer-implemented system and method for inducing sellers to provide responsive offers for electronic delivery to anonymous buyers via a global telecommunications network.

In essence, and with initial reference to Figure 1, the system and method 10 of the invention includes a system software module 100 integrated with a buyer module 200 and a seller module 300. The system and method 10 is preferably implemented over a global telecommunications network such as the Internet, the WorldWide Web, or other such similar networks. A buyer interface 20 displayed on an interactive device 40 provides a buyer with access to the buyer module 200. The buyer module 200 communicates with the system software module 100. Information provided by a buyer through the buyer module 200 is delivered to and processed by the system software module 100 to create an initial buyer inquiry 210. The system software module 100 then processes the buyer inquiry 210 to create an anonymous buyer inquiry 220. The system software module 100 then delivers the anonymous buyer inquiry 220, containing only product/service descriptive information, to a seller module 300. The seller module 300 then causes the anonymous buyer inquiry 220 to be delivered to targeted sellers via a plurality of individual seller interfaces 30 displayed on a plurality of interactive devices 40. Interested sellers may then respond to the anonymous inquiry 220 via the seller module 300. As buyers and sellers access and interact via the system 10, an adaptive hierarchical descriptor structure 400 processes and adapts free format data 500 for incorporation within the descriptor structure 400. A search module 600 provides an alternative process for interrogating the descriptor structure 400. A transaction processing module 800 confidentially consummates transactions between buyers and sellers. An adaptive descriptor placement software module 900 and placement engine 960 process both buyer and seller free format data 500, 550 for inclusion in the adaptive hierarchical descriptor structure 400.

More particularly, and with initial reference to Figure 2, a detailed description of the system and method 10 of the invention is provided. The system and method 10 may be implemented through interactive devices 40 linked to a telecommunications network 50. Interactive devices 40 include but are not limited to desktop computers, portable computers, interactive televisions, personal digital assistants, interactive telephones and other such similar devices having the capability to send and receive information over a telecommunications network and display the contents of each transmission to the user. The interactive devices 40 may be linked to the system via devices such as dial-up modems 60. Links 52 throughout the telecommunications network 50 may be based on one or a combination of a plurality of data transmissions methods. These data transmission technologies may include, but need not be limited to, analog or digital transmission, land lines, wireless, satellite, microwave, dial-up telephony, cable TV lines, broadband fiber-optic, narrowband fiber optic, wideband fiber optic, infrared spectrum transmission, digital or analog cellular transmission, acoustic transmission, radio wave transmission, spread spectrum radio wave transmission and other derivative and developing data transmission technologies. The breadth and reach of the network 50 may be limited in scope or expanded to include a global communications network composed of several different but integrated telecommunication systems and devices. The interactive devices 40 communicate to a system network server 70 across telecommunication links 52 over the telecommunications network 50 where modems 60 or other transmission hardware and firmware related to the transmission method employed serve to transmit data between the interactive devices 40 and the system server 70.

In a preferred embodiment, the system and method 10 is implemented over the Internet and World-Wide Web, with a portion of participant interaction accommodated by web pages or email messages. These forms of interaction and communication are well known in the art and may be created using any of dozens of existing and well-known software applications and computer operating systems designed for such a purpose. The buyer may access the home page using one of a number of network-based browser software systems including MICROSOFT INTERNET EXPLORER, NETSCAPE NAVIGATOR, NETSCAPE COMMUNICATOR, AMERICA ONLINE, and other telecommunication network browsers well-known in the art. For clarity a preferred embodiment of the system and method 10 is described based upon implementation over the Internet and WorldWide Web.

Referring again to Figure 1, the system and method 10 includes a system software module 100 comprising a buyer module 200 and a seller module 300 hosted on an appropriate server computer 70. The system software module 100 includes a software operations module 110, an email server module 120 and a web server module 130. The system software module 100 provides central functionality for the system and method 10 of the invention.

The buyer module 200 and seller module 300 form cohesive integrated portions of a functional matrix of the system and method 10 of the invention. The software operations module 110 acts as a digital liaison between an integrated email server 120 and web server 130. The overall functionality of the system software module 100 is distributed between the buyer module 200, the seller module 300, the email server 120 and the web server 130, as required and dictated by the software operations module 110. The software operations module 110 acts as the central operational controller for the system 10. The software operations module 110 processes interactive input from buyers and sellers received via the email server 120 or the web server module 130 and distributes selected information to either the email server module 120 or the web server module 130 for subsequent delivery and presentation to a buyer or seller.

A prospective buyer accesses the system 10 by connecting to a web site having a specific URL where a home page 22 for the system may be accessed and displayed, via the buyer interface 20, on the buyer's interactive device 40. The home page 22 provides a portal to a tree-shaped hierarchical adaptive descriptor structure 400 (Figure 3) which a buyer interrogates to quickly refine his or her description of a product or service that he or she wishes to purchase or engage, respectively. The tree of the hierarchical descriptor structure 400 includes a main trunk 420. The main trunk 420 is displayed on the home page 22 and includes broad top-level categorical descriptors 422 for businesses, services, products or other items of interest to a potential buyer (Figure 4). Figure 10 provides an example of a home page 22 and representative top-level categorical descriptors 422.

The service ultimately provides access to thousands of categorical descriptors that may be provided by hundreds of thousands of businesses. The categorical descriptors 422, 442, 462 (Figure 4) are organized in a hierarchical structure 400, with each level of subcategories 442, 462 representing a more specific subset of categories 422, 442, 462 from the previous level.

The hierarchical structure 400 is a significant element of the system and method 10 of the invention.

As most clearly shown in Figures 3 and 4, the adaptive hierarchical descriptor structure 400 extends from its trunk 420 to provide a plurality of limbs 440. The limbs 440 each include one or more secondary-level descriptors 442 (Figure 4 and 11). The secondary-level descriptors are natural and logical extensions of the parent top-level descriptors 422. The secondary-level descriptors 442 are terms that are less broad than the parent top-level descriptors 422. Similarly, the limbs 440 extend to form branches 460 having tertiary-level descriptors 462 (Figure 4 and 12) which are logical extensions of their parent secondary-level descriptors 442. A buyer clicks or selects a particular secondary level descriptor 442 to navigate to a particular branch 460. The tertiary-level descriptors 462 are less broad than their parent secondary-level descriptors 442. The branches 460 subsequently extend into leaves 480. Again, a buyer will select a particular tertiary-level descriptor 462 by clicking with their mouse or equivalent pointing device to move to a desired leaf 480.

With reference to Figure 13, the leaf 480 represents the final level of description that may be reached within the overall hierarchical descriptor structure 400 of the system 10. The leaf 480 is comprised of one or more data fields 482 that substantially describe the product or service that the buyer wishes to acquire. In the event that the structured data fields 482 provided at the leaf 480 fail to fully describe the characteristics of a product or the terms and conditions under which a buyer is willing to enter into a bilateral transaction, a free format descriptor field 500 is provided on every leaf 480 to allow a buyer to input additional descriptive data 510 to fully define the product or service of interest. Via an adaptive descriptor placement software module 900, the system 10 will cause the additional descriptive data 510 to be parsed and filtered for reincorporation as new limbs 440 or branches 460 within the hierarchical descriptor structure 400, or, as new data fields 482 of a leaf 480.

Although shown in Figures 3 and 4 and described herein as consisting of four primary levels of description 420, 440, 460, 480, the hierarchical descriptor structure 400 may include a plurality of multiple descendant levels of limbs 440 and branches 460 interposed between the trunk 420 and leaves 480. The number of intermediate limbs 440 and branches 460 will be dependent only on the level of refinement required to substantially describe the particular

product or service. Through continued adaptive use, the adaptive descriptor placement software module 900 will cause the hierarchical descriptor structure 400 to grow new limbs 440, branches 460, and sprout new leaves 480. Hence, although shown herein as including only two levels of descriptive refinement between the trunk 420 and leaves 480, a buyer might actually climb through three, eight or more additional levels of description 440, 460 before reaching a final appropriate descriptive leaf 480. Although additional limbs 440 and branches 460 of description may slightly increase the time spent by a buyer defining their purchase interest, the time spent subsequently searching for the desired leaf 480 will be significantly shortened.

The description of the adaptive hierarchical descriptor structure 400 should not be confused with systems providing a catalogue of products, preceded by a few categorical descriptors. The system and method 10 of the invention described herein does not present a list of available products or services to a potential buyer while the buyer is ascending through the various descriptive levels 420, 440, 460 of the descriptor tree 400. Instead, the system and method 10 implements and presents the adaptive hierarchical descriptor structure 400 to a buyer for two purposes: 1) to aid the buyer in adequately defining the details of an intended purchase, and 2) to minimize the time spent by the buyer in pursuing the intended purchase. Other systems require a buyer to both describe and search for a desired product. The present invention provides a novel means by which a buyer may thoroughly describe an intended purchase and the system 10 performs the search for the buyer.

Having described the interactive hierarchical descriptor structure 400 with which a buyer interacts during his use of the system and method 10 of the invention, Figures 1, 6 and 7 illustrate the steps and procedures implemented by the software operations module 110 of the system software module 100 once the buyer has arrived at a preferred leaf 480 of the hierarchical descriptor structure 400.

Once the desired leaf 480 has been reached, the buyer interface 20 displays an inquiry form 24 to the buyer. As shown in Figure 13, the inquiry form 24 contains multiple data fields 482 that the buyer may complete to describe his or her purchase. The buyer is not required to enter information into all data fields 482; the buyer need only enter information into those data fields 482 that are relevant to his or her description of the desired product or service. Additionally, the inquiry form 24 includes an unstructured data input field 500 that the seller

may use to add other descriptive terms or conditions 510 associated with the purchase. Once the inquiry form 24 has been sufficiently completed, the buyer then submits the inquiry form 24 and its associated information to the system software module 100 of the invention, thereby creating a buyer inquiry 210.

5

To more clearly illustrate this feature of the system of the invention, an example is described below.

A buyer searching for a replacement fender for a vintage Porsche might browse through the following descriptor categories 422, 442, 462:

10

*Automobile*

→ *Automobile Parts*

→ *Used Automobile Parts*

15

→ *Porsche*

→ *Body Parts.*

Once the buyer reached the leaf 480 at Body Parts, the buyer would be presented with an inquiry form 24, in which he or she would detail the key elements of his product or service of interest in provided data fields 482. This product identification and definition method is much more efficient than browsing through a myriad of different items listed in a catalogue format.

20

As an alternative to navigating through the limbs 440 and branches 460 of the structure 400, the entire adaptive hierarchical descriptor structure 400 may also be explored using a search module 600, based on keyword 610 association. A buyer need not browse the descriptor structure 400. Instead, by searching based on a keyword 610, the search module 600 causes the buyer to be presented with a final leaf 480 based on keyword 610 associations with that leaf 480.

25

30

For example, a buyer searching for a Porsche fender will enter "fender, Porsche" into the search module 600. The search module then searches through the adaptive hierarchical descriptor structure 400 to identify categorical descriptors 422, 442, 462 and leaf data fields 482 that closely or exactly match the key words. Then, the search module 600 causes one or

23

more appropriate leaves 480, derived from limb 420 and branch 440 paths that most closely match the key words, to be selected and presented to the buyer immediately along with their associated inquiry forms 24. The buyer then completes the inquiry form 24 specific to that categorical leaf 480.

5

For example, in the *Porsche → Body Parts* category, the buyer will fill in data fields 482 such as "Model", "Year", "Condition", and "Color". In the *Books → Used and Rare → First Editions → Fiction* category, the buyer would fill in data fields 482 such as "Author", "Title", "Publisher", and "Year Published".

10

In addition, a buyer has an option to fill in other general information in the inquiry form 24, such as price range, duration of time that he or she would like to receive responses from sellers, and email address (Figure 6).

15 Further, every leaf 480 presented to a buyer includes an unstructured data field 500. The unstructured data field 500 allows free form text entry, allowing a buyer to further narrow his or her description of the product of interest. For example, where the buyer is submitting an inquiry form 24 for a particular book, the buyer might note in the unstructured data field 500 that he or she would be willing to consider either a first hardcover or a first paperback edition  
20 of the book.

Referring once again to Figure 1 and Figure 5, once the buyer inquiry 210 is received by the web server module 130 of the system software module 100, the software operations module 110 receives the information included in the buyer inquiry 210 and causes information that  
25 might identify the buyer to a prospective seller, for example, the buyer's email address, to be removed from the buyer inquiry 210, thereby creating an anonymous buyer inquiry 220. The anonymous buyer inquiry 220 retains all information associated with the data fields 482 which were originally completed by the buyer. The software operations module 110 stores the buyer's identifying information 219 in a separate protected table 202 in a separate buyer  
30 database 201 on the network computer server 70 hosting the system software module 100. When identifying information 219 is stripped from the buyer inquiry 210, the software operations module 110 also causes a unique buyer tracking number 299 to be stored in the table 202 in the buyer database 201 on the system server 70, and associated with the buyer's



identifying information 219 to allow subsequent extraction of the buyer's identifying information 219.

Other data is also extracted from the information submitted by the buyer on the inquiry form 24. Allowable seller response time is stored in a separate database table and also associated with the unique tracking number 299 originally assigned upon receipt of the inquiry 210 at the server 70. This data establishes the number of days or weeks that the buyer inquiry 210 is to remain "open" to responses from interested sellers. Sellers will not be permitted to respond to an "expired" inquiry 220 because the buyer is anonymous; they will simply be told by the system 10 that the lead has expired.

With reference to Figure 6, at this juncture, the software operations module 110, via a subordinate adaptive descriptor placement software module 900 and an associated descriptor placement engine 960, also causes any additional information provided by the buyer in the unstructured data field 500 of the inquiry form 24 to be parsed and filtered to extract new relevant descriptors 510. The software operations module 110 then processes the extracted descriptors 510 and compares the descriptors 510 to existing descriptors 442, 462 which were previously encountered during the buyer's foray through the descriptor structure and to existing data fields 482 contained in the inquiry form 24 for the specific leaf 480. The software operations module 110 then deletes existing redundant descriptors 510, then adds non-redundant descriptors 510 to the structured data fields 482 on leaf 480 inquiry form 24 for presentation to subsequent buyers arriving at the same leaf 480 and inquiry form 24 in the future. Consequently, as each buyer completes and submits an inquiry form 24 with information included in the unstructured data field 500, the software operations module 110 automatically updates, expands, and refines the hierarchical descriptor structure 400 to enhance the ability of a subsequent buyer to be presented with the most complete descriptor structure 400 which aids the buyer in completing a description of a desired purchase to more likely induce higher quality, targeted responses from interested sellers.

Referring to Figures 1 and 7, structure and interactivity of the seller software module 300 is described. The seller software module 300 uses the elements of the system software module 100 to interact with the system 10. Seller interactions with the system software module 100 and its components 110, 120, 130 occur via a seller interface 30 displayed on an interactive device 40. Preferably a seller will first register with the system 10 via a seller registration

web page 32. The seller registration page 32 is substantially similar to the buyer home page 22 except that the seller registration page 32 provides a means to select categorical descriptors 422, 442, 462 at the trunk 420, limb 440 and branch 460 levels for purposes of seller registration.

5

A seller interacts with the equivalent hierarchical descriptor structure 400 as that presented to a buyer. However, the purpose of the seller's interaction is intended to allow the seller to select and register to receive only those anonymous inquiries 220 which fall within the seller's specific pre-selected limbs 440, branches 460 or leaves 480. During registration, a seller will select those limbs 440, branches 460 and leaves 480 for which the seller wishes to receive any anonymous inquiries 220 generated by the software operations module 110. Additionally, the seller may select any descriptors, 422, 442, 462 or leaves 480 for which it wishes to receive anonymous inquiries. Consequently, a seller may elect to register for entire limbs 440 or branches 460 and any underlying derivative limbs 440, branches 460 or leaves 480. Thus, a seller is able to limit anonymous inquiries 220 received to only those anonymous inquiries 220 derived from the seller's pre-selection of categorical descriptors 422, 442, 462 or leaves 480. The seller makes a selection of a particular limb 440, branch 460 or leaf 480 by using a pointing device to click a box or other graphic selection means adjacent the particular limbs 440, branches 460 or leaves 480 of interest. The software operations module 110 continuously records the seller's selections into a table 302 in separate seller database 301 hosted on the system computer server 70.

The following example illustrates this portion of the process. A plurality of auto parts dealers may have registered to receive anonymous inquiries 220 associated with the *Porsche → Body Parts* category. These dealers will receive the inquiry 220 for the Porsche fender. Book dealers who have registered for the *First Editions → Fiction* category will receive inquiries 220 for that category.

With reference to Figure 1, for security purposes, the seller's identifying information 319 is stored separately from the buyer database 201 containing the buyer identifying information 219 and the buyer's associated unique tracking number 299.

With a plurality of sellers having registered to receive specific types of anonymous inquiries 220, originating buyer inquiries 210 may then be processed by the system software module

100 and software operations module 110 for eventual delivery to registered sellers. Once the software operations module 110 receives an anonymous inquiry 220 generated by a buyer, the software operations module 110 compares the leaf 480 identifier against the table 302 of sellers registered to receive any anonymous inquiries 220 resulting from that leaf 480 or limbs 440 or branches 460 having a parental relationship to the leaf 480. The software operations module 110 then causes a file 303 of the filtered registered sellers to be created. Additionally, the software operations module 110 concurrently causes a unique seller tracking number 399, derived from or linked to the unique buyer tracking number 299, to be assigned to each registered seller included in the filtered seller registration file 303.

To illustrate, the initial buyer inquiry 210 might be assigned the unique buyer tracking number 299, A-12345. If the inquiry 210 were sent to five different sellers, the software operations module 110 would cause the email server 120 to send five separate email message inquiries 220 to the five different sellers. These messages 220 would have unique tracking numbers 399, which are assigned by the software operations module 110 prior to transmission via the email server 120 over the email system on the telecommunications network 50. For example, the five different messages 220 might be assigned the following unique tracking numbers 399: A-12345-1, A-12345-2, A-12345-3, A-12345-4, and A-12345-5.

The software operations module 110 then causes the anonymous inquiry 220 and the filtered seller registration file 303, containing registered seller identifying information 319, including email addresses and the unique seller tracking number 399, to be transmitted to the email server 120. The email server 120 then causes the information contained in the anonymous inquiry 220 to be placed into the body of a registered seller anonymous e-mail message 221. The email server 120 then electronically transmits an individual seller anonymous email message 221 containing the anonymous inquiry 220 to each of the sellers listed in the filtered seller registration file 303 for presentation to a seller by the seller software module 300.

Upon receipt of a transmitted anonymous buyer inquiry 220, an interested seller may then provide a further expression of interest in entering into negotiations with the buyer by following the instructions included in the transmitted inquiry 220. Via the seller software module 300, seller may respond to the transmitted inquiry 220 in one of three ways. First, the seller may respond directly to an email inquiry 221 by replying with his or her own email

message 341. Second, the seller may respond to an inquiry 220 sent as a facsimile 222 or automated phone call 224 by replying to the facsimile 222 or automated phone call 224 with a corresponding seller facsimile 342 or automated phone call 344.

- 5 Third, where the seller receives transmitted inquiry 220 but decides not to respond to the inquiry 220, the seller may forward the inquiry 221 to other sellers that might be interested in responding to the inquiry 220. If another party responds to the inquiry 220, the original recipient will receive some type of referral fee for forwarding the inquiry 221.
- 10 In most cases, the transmitted anonymous inquiry 220 will have been delivered to a seller as an email inquiry 221. Preferably, the seller can respond to the anonymous inquiry email 221 by either replying directly to the e-mail inquiry 221, or, by navigating to the system 10 web site. The seller is provided with an option in the email inquiry 221 to select either form of response by selecting an appropriate interactive button or other triggering means displayed on
- 15 the email inquiry 221.

A seller response 340 may take the form of an email 341, a facsimile 342, a telephone message 344, a web site response, or a forwarded response 348 (Figure 7). If a seller elects to transmit a direct email response 341, after selecting the appropriate button on the

20 anonymous email inquiry 221, the software operations module 110 initiates the generation of a responsive email 341 to be generated on the seller's interactive device 40. The responsive email 341 will include confirming text indicating that the product or service to be provided to the buyer meets the criteria, terms, conditions and other requirements included in the body of the original anonymous inquiry email 221. Additionally, the seller will be provided with an

25 option to identify any aspects of his or her product or service that may differ from the criteria provided in the anonymous inquiry email 221, by completing an unstructured seller data field 550. Upon completion, email software on the seller's interactive device 40 causes the seller's email response 341 to be transmitted back to the system email server 120. The email server 120 then transmits the contents of the seller's email response 341 to the software operations

30 module 110. The software operations module 110 then matches the unique seller tracking number 399, still associated with the seller's email response 341, against the unique buyer tracking number 299 associated with the original anonymous email inquiry 221. The software operations module 110 then causes an offer email message 230 to be sent to the buyer. This offer email 230 will include the specifics of the seller's response 340 along with

associated identifying information 319. The buyer may then review the seller's response 340 and elect whether to contact the seller to pursue further negotiations of price, specifications, terms of payment or other transactional issues.

5 Alternatively, if sellers do not wish to receive email (or do not have email), the anonymous buyer inquiry 220 can be generated as a facsimile 222 or as an automatically generated phone call 224. These inquiries 222, 224 will also be assigned a unique seller tracking number 399 in the same fashion described above.

10 Referring to Figure 7, the method by which a seller responds to anonymous inquiries 220 received as an email 221 is as follows. First, the seller receives the email inquiry 221 in his or her own email account, stripped of any buyer identifying information 219. The email inquiry 221 contains four major pieces of information: 1) the unique tracking number 399 that links the specific buyer inquiry 210 to the specific seller, 2) the number of days that the  
15 seller has to respond to the inquiry 210, 3) the information supplied by the buyer when the original inquiry form 24 was completed, and 4) a URL address, such as www.deepmind.com, that the buyer can open to respond to the email inquiry 221.

If a seller does not wish to respond to the email inquiry 221, the seller simply deletes the  
20 email inquiry 221; no other action is required. A seller who wishes to respond to the email inquiry 221 may then launch a standard Internet browser resident on his or her interactive device 40 and navigate to the URL provided in the email inquiry 221.

Next, the seller enters a unique username and password into a login form presented to the  
25 seller at the URL provided in the email inquiry 221. The seller will then be provided with a response form 34 that allows them to type in their response to the buyer inquiry 221. Typically, a seller will confirm in the form 34 that he or she has the item, give their purchase price, and offer a few "sales" points about their item. The seller then submits the information to the system 10 by moving his or her pointer device 42 to an appropriate "submit" button  
30 displayed on the web page. Once submitted, the information associated with the seller's response 340 to the buyer's inquiry 221 is transmitted via the telecommunications network 50 to the software operations module 110 resident on the network server 70. The software operations module 110 then causes the sellers contact information 319 to be incorporated with the seller's response. The software operations module 110 then causes the seller's

response information and contact information to be transmitted to the email server 120 and incorporated in an offer email message 230 and transmitted to the originating buyer.

As a means of more clearly illustrating this portion of the process, the following example is provided.

An auto parts dealer responding to the request for a Porsche fender might respond: "Yes, I have the fender. It is \$500 plus shipping. It is in excellent condition, and includes the optional chrome trim." Or, in another example, a book dealer responding to a request for a first edition novel might respond: "Yes, I have the hardcover edition but no dust jacket. The book is in excellent condition and is \$75 including shipping."

If the seller has received the buyer's original anonymous inquiry 220 in the form of a facsimile 222 or automated phone call 224, the seller would respond in the following manner (Figure 7). Sellers will receive either a facsimile 222 or a phone call 224 that dictates the same information conveyed in an email inquiry 221. Fax recipients will receive a copy similar to the email inquiry 221. Phone call recipients will receive a phone call to a number designated by the seller: an automated phone operator system will read to them the information contained in the buyer inquiry 220.

Both fax recipients and phone call recipients will be given a phone number to a voice mail system maintained by system 10. The seller will call the number and receive a series of instructions. Using a standard phone keypad, the sellers will input their unique tracking number 399. Next, they will follow several simple instructions allowing them to indicate that they can fill the buyer's order and their price.

Both fax recipients and phone call recipients will have their response 342, 344 submitted to the system software module 100, where the software operations module 110 will cause their response 342, 344 to be regenerated into digital text for inclusion in an offer email message 230 to be transmitted to the prospective buyer.

Referring to Figure 7, where a seller receives an inquiry 220, but elects not to respond, yet decides to forward the inquiry 220 to another interested party, the system software module 100 will respond and take slightly different actions. First, the seller forwards the received

30

- inquiry 220 to other potentially interested sellers. Although any seller may forward received inquiries 220, it is likely that sellers receiving a buyer inquiry 220 in the form of an email inquiry 221 will do most forwarding. The seller will forward the email inquiry 221 sent from the system software module 100 to other potential new sellers. The original recipient seller may add an introduction to the email inquiry 221, but they will not be able to change the text of the original email inquiry 221 or the unique tracking number 399. A new seller who has received a forwarded email inquiry 221 will respond in any of the same methods described above. If responding directly to the system 10, the forwarded new seller will also access the Internet by using their web browser and navigating to the same URL given to the original seller. The new seller who received the forwarded email inquiry 221 will login by providing a unique username and password. The software operations module 110 will then identify the seller as a new seller, and add the new seller's identifying information to the seller table 302 of the seller database 301 of the seller module 300.
- 15 The new seller will then be instructed to register for the service in the same manner as other sellers before he or she can respond to the inquiry 220. Once the new seller has registered with the system 10, the software operations module 110 will allow the new seller to respond to the inquiry 220 in the same manner as the original recipient seller.
- 20 The system software will recognize that this new seller responded to the transmitted inquiry 220 through the unique tracking number 399 of the original recipient seller. The software operations module 110 will then enable a "credit" to the original seller with a fee to compensate the forwarding seller for the referral.
- 25 Once a seller, whether an original or a forwarded seller, has responded to the inquiry 220 and submitted his or her response to the system software module 100, the software operations module 110 will match the unique tracking number associated 399 with the seller to the corresponding unique buyer inquiry tracking number 299. Once the match has been confirmed, the software operations module 110 interacts with the email server 120 to forward the details of the seller's response 340 to the buyer's email account.
- 30

Seller responses 340, whether via email 341, facsimile 342 or an automated phone response system 344, will all be processed as emails by the software operations module 110. Once converted to a standard offer email message 230, including the information associated with

the particular seller's response 340, the software operations module 110 will cause the email server 120 to transmit the email offer 230 via the telecommunication network 50 to the buyer email inbox at the buyer's interactive device 40.

5 The email offers 230 delivered to the original interested buyer's email inbox contain the sellers' responses 340 to the inquiry 220 along with the sellers' contact information 319 including phone, address and email addresses (if available). The buyer may then review the email offers 230 from the sellers and decide whether to contact the sellers directly to consummate the transaction.

10

Once the date for maintaining the inquiry 210 open has been reached, the software operations module 110 resident on the system server 70 will delete the buyer's inquiry 210 from the buyer database 201, other than the originally assigned unique tracking number 299. Any seller responses 340 directed to the assigned unique tracking number 299 will then  
15 subsequently be sent a standard expiration email message 349 generated by the software operations module 110 and transmitted by the email server 120, advising the seller that the buyer inquiry 220 is no longer open.

The system and method 10 of the invention includes an electronic transaction processing  
20 software module 800 to retain buyer credit card information and anonymously transmit funds to a seller's account upon successful consummation of a transaction. A seller confirms a transaction through his or her unique account to activate the transmission of funds to the seller's account by the transaction processing software module 800. The transaction processing software module 800 maintains the confidentiality of the buyer. This increases  
25 the confidence of the buyer in participating in an online electronic transaction since the buyer's credit information will be maintained only on the system server 70. The seller receives only transmitted funds and never receives any credit or identifying information 219 of the buyer. Consequently, the buyer needs only to gain confidence in the integrity and security of the entity managing the system 10, rather than having to distribute credit  
30 information to multiple sellers, of which the buyer may have little information or confidence in security of the financial transaction.

Having thus described the primary elements and the interaction of those elements of the system 10 of the present invention, the following sections address the specific methodology



and associated steps of the system 10. Figure 5 is provided to illustrate the basic steps of the system and method 10 of the invention. For clarity, the number of each step is provided at the beginning of the particular description of the step, with the step number underlined to distinguish a step number from a component number. Figures 6 through 9 illustrate in detail the steps associated with primary elements of the system and method 10 of the invention. Any repetition of interaction described earlier is intended to ensure that the process steps of the system and method 10 of the invention are logically connected to one another.

With reference to Figure 5, the primary elements of the system 10, including the system software module 100, the buyer software module 200 and the seller software module 300, include process steps that enable complementary interaction between the modules 100, 200, 300. 250 Referring first to the buyer module 200, a buyer interacts with the system 10 by first accessing the system homepage 22. 260 The buyer then interrogates and navigates the hierarchical descriptor structure 400. 268 Navigating the descriptor structure 400 causes the buyer to eventually reach a desired leaf 480. 270 The buyer then completes the data fields 482 and 280 submits an inquiry 210 to the system 10. 170 The inquiry 210 is transmitted to the system software module 100 where the buyer descriptor interrogation path is determined. 172 Concurrently, a unique tracking number 299 is assigned, and 174 the buyer's email address is stripped from the inquiry 210 and 180 stored in the buyer database 201. 190 Concurrently, the system software module 100 accesses the seller database 301 and 191 filters the seller database 301 to extract a list of sellers who have registered to receive anonymous inquiries 220 associated with the particular buyer's descriptor structure 400 interrogation path 203.

192 A unique tracking number 399 is then assigned to each seller on the extraction list and the anonymous inquiry 220 is 350 transmitted to each seller on the list. 380 Upon receipt of the anonymous inquiry 220, the seller module 300 presents the inquiry 220 to an interested seller. 382 The seller may elect to respond to the particular inquiry 220, at which time the seller's response 340 will be transmitted to the buyer. 384 The buyer may then elect to contact the seller directly to pursue negotiation of the transaction.

Referring now to Figure 6, the particular steps associated with the process of the buyer software module 200 are described in greater detail. For clarity, the number of each step is provided at the beginning of the particular description of the step, with the step number

33

underlined to distinguish a step number from a component number 250 The buyer first accesses the homepage 22. 260 The buyer may then elect to either manually navigate the hierarchical descriptor structure 400 or elect to use a search module 600 to automatically search the descriptor structure 400. If the search module 600 is selected, the buyer will enter  
5 key word descriptors 610 that the buyer module 200 will communicate to the system software module 100. The software operations module 110 of the system software module 100 will then automatically search the descriptor structure 400 to find a leaf 480 having the best match to those keyword descriptors 610 and 268 present that leaf 480 to the buyer.

10 260 Where the buyer elects to manually navigate and interrogate the descriptor structure 400, he or she will 262 climb through the descriptor tree structure 400 to follow a next selected limb 420, and then a branch 460 to also arrive at the leaf 480 best representing the product of interest.

15 270 The buyer then completes those data fields 482 specific to the leaf 480 and which also describe the product of interest to the buyer. 272 Additionally, the buyer will complete additional terms and conditions associated with his or her inquiry 210. Subsequently, the buyer may elect to also complete a free format data entry field 500 to further describe the product or purchase of interest. 280 The buyer then submits the completed form as an  
20 inquiry 210 to the system software 100.

280 Having submitted the inquiry 210, the software operations module 110 of the system software module 100 determines 170 the interrogatory path 203 used by the buyer. 172 Concurrently, the software operations module 110 assigns a unique buyer tracking number  
25 299 to the inquiry 210 and 174 strips the buyer's email address from the inquiry 210. 180 The content of the inquiry 210, the buyer path 203, the buyer tracking number 299 and the buyer email address are then stored in the buyer database 301.

190 The software operations module 110 then uses the buyer interrogatory path information  
30 203 to filter the seller database 301 based upon the limbs 440 and branches 460 contained within the interrogatory path 203, creating a file list 303 of those sellers who were registered to receive inquiries 210 associated with the limbs 440 and branches 460 included in the buyer interrogatory path 203. 192 Each buyer is then assigned a unique seller tracking number 399, which is derivative of the unique buyer tracking number 299.

<sup>33</sup>

underlined to distinguish a step number from a component number 250 The buyer first accesses the homepage 22. 260 The buyer may then elect to either manually navigate the hierarchical descriptor structure 400 or elect to use a search module 600 to automatically search the descriptor structure 400. If the search module 600 is selected, the buyer will enter  
5 key word descriptors 610 that the buyer module 200 will communicate to the system software module 100. The software operations module 110 of the system software module 100 will then automatically search the descriptor structure 400 to find a leaf 480 having the best match to those keyword descriptors 610 and 268 present that leaf 480 to the buyer.

10 260 Where the buyer elects to manually navigate and interrogate the descriptor structure 400, he or she will 262 climb through the descriptor tree structure 400 to follow a next selected limb 420, and then a branch 460 to also arrive at the leaf 480 best representing the product of interest.

15 270 The buyer then completes those data fields 482 specific to the leaf 480 and which also describe the product of interest to the buyer. 272 Additionally, the buyer will complete additional terms and conditions associated with his or her inquiry 210. Subsequently, the buyer may elect to also complete a free format data entry field 500 to further describe the product or purchase of interest. 280 The buyer then submits the completed form as an  
20 inquiry 210 to the system software 100.

280 Having submitted the inquiry 210, the software operations module 110 of the system software module 100 determines 170 the interrogatory path 203 used by the buyer. 172 Concurrently, the software operations module 110 assigns a unique buyer tracking number  
25 299 to the inquiry 210 and 174 strips the buyer's email address from the inquiry 210. 180 The content of the inquiry 210, the buyer path 203, the buyer tracking number 299 and the buyer email address are then stored in the buyer database 301.

190 The software operations module 110 then uses the buyer interrogatory path information  
30 203 to filter the seller database 301 based upon the limbs 440 and branches 460 contained within the interrogatory path 203, creating a file list 303 of those sellers who were registered to receive inquiries 210 associated with the limbs 440 and branches 460 included in the buyer interrogatory path 203. 192 Each buyer is then assigned a unique seller tracking number 399, which is derivative of the unique buyer tracking number 299.

194 The software operations module 110 then causes an anonymous inquiry 220 to be generated and 350 routed to the registered sellers.

5 Referring now to Figure 7, the anonymous inquiry 220 may be 350 routed to each seller either as a facsimile or automated phone call 360, or as an email 370. Additionally, after receipt as an email 221, a facsimile 222, or an automated phone call 224, an original recipient seller may elect to 390 forward the inquiry 220 to other potentially interested sellers.

10 361 Considering first those inquiries 220 transmitted to sellers as facsimiles 222 or automated phone calls 224, the seller receives the same information as that conveyed in an email 221. 362 Facsimile recipients will receive an electronic or printed message similar to the email 221. 363 Phone call recipients will receive a phone call at a predesignated number where an automated operator provides the buyer inquiry 220 information. 364 Both the fax  
15 and phone recipients are given a phone number to contact a voice mail system operated by the system software module 100. 365 Interested sellers then call the phone number and follow a series of instructions, which allow interaction with the system 10 via a telephone keypad. 366 The seller phone response 344 is then submitted to the system software module 100 and the teleprompts are regenerated by the system software module 100 into text. 380  
20 The response 340 is then treated by the system software module as an email response 341.

371 Where the seller receives an anonymous inquiry 220 as an email inquiry 221, the seller first receives the email inquiry 221 in his or her own inbox at his or her email account. 372 The email inquiry 221 contains the seller's unique tracking number 399, the number of days  
25 the seller has to respond to the email inquiry 221, and an alternative URL where the seller can respond to the email inquiry 221 via the World Wide Web. 374 If the seller does not wish to respond to the email inquiry 221, no further action is required of the seller. 373 Where the seller elects to respond to the email inquiry 221, the seller may either 375 submit a direct email response 341 or a 376 web-based response 346.

30 378 Where the seller has elected to submit a direct email response 341, the seller first types in his or her response 341, confirming that the desired item is available, what the purchase price for the item happens to be and perhaps a few additional sale points concerning the item, such as its condition, age or other distinguishing characteristic. The seller software module 300

also causes the seller's identifying information 319 to be added to the body of the email response 341. 379 The seller then submits the email response 341.

377 Where the seller has elected to submit a response 340 via his or her web browser, the seller launches a standard web browser, goes to the URL identified in the email inquiry 221, logs in, and retrieves a web page having a form the seller will complete to create his or her web-based response 346. 379 Then, the seller submits his or her response. 380 The system software module 100 will process all responses as individual emails. 381 Upon receipt of a seller response 340, the software operations module 110 will match the seller's unique tracking number 399 contained within the response 340 against the buyer's unique tracking number 299, to determine to whom the seller's response 340 should be transmitted. 382 The software operations module 110 will then transmit the content of the seller's response 340 and the seller's identifying information 319 to the email server module 120. The email server module 120 will then transmit a seller offer email 230 to the matching buyer. 383 The individual offer email 230 is delivered to buyer's email inbox and account. 384 The offer email 230 includes the content of the seller's response. 385 The buyer then has total discretion as to whether he or she wishes to contact the seller directly to pursue additional negotiations 386 or perhaps, to consummate the transaction 387.

390 Where the original seller recipient elects not to respond to the inquiry 220, the system 10 allows the original seller to forward the inquiry 220 to another potentially interested seller. 391 The original recipient seller may add an introduction, but not change the inquiry text nor the seller's unique tracking number 399. 392 The new recipient seller will be directed to the same URL as the original recipient seller. 393 The new recipient seller must then login to the system 10 as a new seller. 394 The new seller must then register with the system 10 before he or she is allowed to respond to the inquiry 330. 395 Once registered, the new seller will respond in the same manner as the original seller was able. 396 Additionally, the system 10 will cause a referral fee to be transmitted to the original seller recipient.

Referring now to Figure 8, the basic steps associated with the implementation of a transaction processing software module 800 integrated with the system and method 10 of the invention is described. For clarity, the number of each step is provided at the beginning of the particular description of the step, with the step number underlined to distinguish a step number from a component number. 810 First, the buyer accesses the system 10 via the system homepage 22.

36

812 The buyer then navigates to a credit registration page. 814 The buyer then completes all data fields on the registration page. 820 The buyer then submits the registration page to the system software module 100 for registration. 822 The transaction processing software module 800 received the information from the system software module 100 and causes the buyer credit information to be stored in the buyer database 201. 830 During use of the system and method 10 of the invention, a buyer and seller may elect to consummate a transaction. 832 The buyer then directs the seller to bill through the system transaction processing software module 800. 834 The seller subsequently accesses the system 10 web site to submit data to confirm transaction consummation and the particular terms and conditions, including price. 840 The system software module 100 then notifies buyer of seller's communication. requesting confirmation of price. 850 The buyer then accesses the system 10 web site using his or her unique password and identification code. 860 The buyer then confirms the transactions consummation and the negotiated price. 870 The system transaction processing module then credits the seller's account for the confirmed price and debits buyer's credit card for the corresponding amount.

Referring now to Figure 9, the steps associated with the implementation of the adaptive descriptor placement software module 900 are described. For clarity, the number of each step is provided at the beginning of the particular description of the step, with the step number underlined to distinguish a step number from a component number. 910, 920 The adaptive descriptor placement module only operates when either a buyer or seller elect to enter information into their respective free format data entry fields 500, 550. 912, 922 After entering free format data 500, 550, the, buyer or seller submits their inquiry 210 or response 340 to the system software module 100. 930 The system software module 100 then delivers the free format data 500, 550 to the software operations module 110. 930 The software operations module 110 then directs and causes the adaptive descriptor placement software module 900 to extract and parse the free format data 500, 550 from the buyer's inquiry 210 or the seller's response 340. 940 The adaptive descriptor placement software module 900 then checks the data 500, 550 to determine if it contains any trivial terms. Trivial terms will include such terms as "the," "a," "and," and other terms that do not provide substantial descriptive value. 944 Any trivial terms are then deleted. 942 The adaptive descriptor placement software module 900 then compares the remaining terms to the descriptors 422, 442, 462 or data fields 482 included in the hierarchical descriptor structure 400. 950 The placement module 900 then checks to see if any terms match. 954 If yes, the matching terms

are deleted from the extracted and parsed data 500, 550. 956 Any remaining new terms are transmitted to the descriptor placement engine 960. 990 The descriptor placement engine 960 then automatically incorporates the new non-trivial and non-matching terms within appropriate sectors of the hierarchical adaptive descriptor structure 400.

5

The present invention may also incorporate web-based email for both buyers and sellers interacting with the system 10. Provision of an integrated web-based email system will streamline the process of interaction between buyers and sellers, while still maintaining the desired anonymity for the buyer, and enhance seller interaction by providing a uniform interface. For example, buyers will not need to have emails forwarded to an email account given to them by an employer. Conversely, interested sellers may segregate their sales via the system 10 of the invention from sales generated in other means. The email portion 120 of the system software 100 can be based on a number of existing systems already well known and widely used in industry today.

15

Further, the system software module 100 resident on the server 70 will allow an interested buyer to be included on mailing lists from sellers promoting items of interest to that buyer. The buyer will control such selections, and the system software module 100 will maintain the confidentiality of the buyer identification 219 by coordinating the transmission of any emails from the seller, through the system software module 100, and then to the interested buyer. To ensure anonymity, the system software module 100 once again uses the buyer's unique tracking number 299. Sellers will not receive buyers' email addresses and buyers will only receive an email once. Buyers will benefit by allowing them to receive advertisements from sellers without having to place themselves on a mailing list that could generate additional unwanted solicitations. Sellers will benefit because their email solicitations are targeted toward potential customers that have previously expressed a high level of interest in the type of product being sold by the seller.

20

25

The software operations module 110 further includes the capacity to periodically subject the databases 201, 301 to audits of stored information, particularly email lists. These audits are used to provide information to buyers concerning the number of transmitted inquiries 220 being sent to interested sellers, and to extract certain sellers from the seller list who have not responded to any transmitted inquiries 220 after a certain period of time.

30

With reference to Figure 16, in addition to the functionality described above, the system and method 10 of the invention includes several other desirable and complementary features 700. Some of these features are beneficial to the buyer 710; others are more beneficial to a seller 720. For example, the software operations module 110 may incorporate automatic links 712 or interfaces to a seller web site in offer emails 230 transmitted to buyers. Further, the software operations module 110 could support inclusion of product images 724 submitted by the seller in any inquiry response 340. Still further, the software operations module 110 could include functionality to manage and track product inventory for various sellers 722, whether the particular product is of a digital or tangible nature. Further, the software operations module 110 may provide functionality to support insertion of targeted advertising directed to buyers that have previously identified interests in certain product categories 724.

The software operations module 110 may also provide a seller rating system 714, including capability and functionality to analyze, assess and rate buyer satisfaction with various sellers, and subsequently provide that rating information in a system-consolidated offer email 230 to a buyer concurrent with information extracted from a seller response 340. Additionally, the system may include functionality to filter and screen buyer inquiries 220 or seller responses 340 to inquiries 220 to satisfy the desire of either buyers or sellers to deal only with parties in a particular geographic proximity 716.

The system and method 10 of the invention may be further enhanced to provide a seller registration system 726 to verify the capability and competence of any seller responding to buyer inquiries 220. The system and method 10 of the invention may be further enhanced to provide a broader electronic posting 727 of inquiries 220 to a broader spectrum of sellers, where the original transmitted inquiries 220 may have failed to receive any seller responses 340. In addition, the system may be adapted to convert the structured data submitted by buyers or sellers into a natural language format 728 that may improve review by either buyers or sellers of responses 340 or inquiries 220, respectively.

This disclosure is provided to reveal a preferred embodiment of the invention and a best mode for practicing the invention. However, one skilled in the art will readily appreciate that other combinations of operating systems, software applications, hardware components and programming languages may be substituted to create components of the invention set forth herein without departing from the spirit and scope of the present invention. Further,



additional advantages, applications and modifications of the invention will readily occur to those skilled in the art. Accordingly, the invention should only be limited by the claims included below.

40  
CLAIMS

5 I claim:

1. A system for inducing anonymous non-binding offers from sellers, implemented over a global telecommunications network, the system comprising:

a system software module;

10 said system software module including a software operations module, an email server module and a web server module;

a buyer software module;

said buyer software module including a buyer interface having a home page and an inquiry form;

15 a seller software module including a seller interface having a registration page and a seller email message;

an adaptive hierarchical descriptor structure module including at least one main trunk, at least one limb, at least one branch, and at least one leaf;

said at least one main trunk having at least one top-level categorical descriptor;

20 said at least one limb having at least one secondary-level categorical descriptor;

said at least one branch having at least one tertiary-level descriptor;

said at least one leaf having at least one data field; and,

an adaptive descriptor placement module.

25 2. The system of Claim 1 wherein said at least one leaf further includes at least one unstructured data entry field for allowing a buyer to enter unstructured data into said unstructured data entry field.

30 3. The system of Claim 2 wherein said adaptive descriptor placement module further includes a descriptor placement engine; said descriptor placement engine accommodating extraction and filtration of said unstructured data and placing said filtered unstructured data within said adaptive hierarchical descriptor structure.

4. The system of Claim 1, further including a keyword search software module, wherein

the buyer may enter key descriptive terms into said keyword search software module and is immediately presented with at least one leaf of the hierarchical descriptor structure, wherein said at least one leaf corresponds most closely to an interrogatory path associated with the entered key descriptive terms.

5

5. The system of Claim 1, further including an anonymous transaction processing module for consummating a transaction between a buyer and a seller.

5. A method for inducing an anonymous; non-binding targeted offer from a seller, said method including the steps of:

10

displaying a seller interface on an interactive device to a seller, said seller interface including a registration page;

providing a first view of an adaptive hierarchical descriptor structure on the registration

15

page, wherein the adaptive hierarchical descriptor structure includes a plurality of categorical descriptors;

providing a means to select at least one categorical descriptor listed in the adaptive hierarchical descriptor structure;

20

causing the seller to receive inquiries from buyers, where the inquiry is derived from the at least one selected categorical descriptor;

providing a means for the seller to respond to the buyer inquiry;

transmitting the seller response to the buyer.

25

6. A method for facilitating anonymous buyer inquiries to induce targeted seller offers, wherein said method is implemented over a global telecommunications network, said method including the steps of:

providing a computer server;

linking the computer server to at least one buyer interactive device and at least one seller interactive device over a telecommunications network via a telecommunications

30

link;

hosting a system software module on the computer server, wherein the system software module includes a software operations module, an email server module and a web server module;

hosting a buyer software module on the computer server, wherein said buyer

42

software module interacts with the buyer interactive device;

hosting a seller software module on the computer server, wherein said seller software module interacts with the seller interactive device;

causing the system software module to transmit and display information to a buyer  
5 via the at least one buyer interactive device and causing the system software module to display information to a seller via the at least one seller interactive device;

displaying to the buyer a home page via said buyer interactive device;

providing on the home page a visual display of a hierarchical descriptor structure;

providing to the buyer a means to interrogate the hierarchical descriptor structure;

10 interrogating the hierarchical descriptor structure;

causing an inquiry to be generated;

providing a means to transmit the inquiry to a seller;

providing a means for the seller to create a response to the inquiry;

15 providing a means to transmit the seller response to the buyer, wherein the response includes seller identifying information to allow the buyer to directly contact the responsive seller.

7. The method according to Claim 7, wherein said step of providing a means for the buyer to interrogate the hierarchical descriptor structure further includes the steps of:

20 presenting to the buyer a main trunk of the hierarchical descriptor structure, wherein the main trunk includes at least one top-level categorical descriptor;

providing the buyer a means to select one of the at least one top-level categorical descriptors;

selecting one of the at least one categorical descriptors;

25 causing a limb of the hierarchical descriptor structure to be displayed to the buyer, wherein said limb includes at least one secondary-level descriptor;

providing the buyer a means to select one of the at least one secondary-level categorical descriptors;

30 causing a branch of the hierarchical descriptor structure to be displayed to the buyer, wherein said branch includes at least one tertiary-level descriptor;

providing the buyer a means to select one of the at least one tertiary-level categorical descriptors;

selecting at least one of the at least one tertiary-level categorical descriptors;

causing a leaf of the hierarchical categorical descriptor structure to be displayed to the

buyer, wherein the leaf includes at least one data entry field; and,  
providing a means for the buyer to enter information into the data entry field.

9. The method according to Claim 7; further including the steps of:  
5 stripping buyer identifying information from the inquiry;  
storing the buyer identifying information in a table of a buyer database hosted on the  
computer server;  
adding a unique buyer tracking number to the inquiry;  
storing the unique buyer tracking number in the table of the buyer database; and,  
10 associating the unique buyer tracking number with the buyer identifying information.

10. The method according to Claim 8; further including the steps of:  
causing the leaf to include an unstructured data entry field;  
providing a means for the buyer to enter unstructured data into the unstructured data  
15 entry field;  
extracting the unstructured data from the unstructured data entry field;  
processing the unstructured data to identify trivial non-descriptive terms;  
discarding the trivial non-descriptive terms;  
comparing the remaining unstructured data to the categorical descriptors of the  
20 hierarchical descriptor structure;  
identifying any remaining unstructured data which matches existing categorical  
descriptors;  
discarding any unstructured data which matches existing categorical descriptors; and,  
placing the remaining unstructured data within the hierarchical descriptor structure.

25 11. The method according to Claim 10; wherein said placing the remaining unstructured  
data step is immediately preceded by the additional steps of:  
transmitting the remaining unstructured data to a descriptor placement engine; and,  
organizing the remaining unstructured data into a hierarchical structure.

30 12. The method of Claim 8; wherein said step of displaying a home page to a buyer is  
immediately preceded by the additional steps of:  
displaying a registration page to a seller, the registration page including the  
hierarchical descriptor structure;

providing a means for the seller to explore the hierarchical descriptor structure;  
providing a means for the seller to select at least one categorical descriptor, thereby causing the seller to be registered to receive an inquiry derived from the selected at least one categorical descriptor;

5 providing a means for the seller to select at least one data entry of a leaf of the hierarchical descriptor structure, thereby causing the seller to be registered to receive an inquiry derived from the selected at least one data entry field.

13. The method of Claim 7, wherein said step of providing a means for the seller to  
10 create a response further includes the steps of:

providing the seller with a response form; and,  
providing a means for the seller to enter data into the response form to confirm seller's ability to respond to the inquiry;

15 14. The method of Claim 13; including the additional steps of:  
providing an unstructured response field on the response form; and,  
providing a means for the seller to enter free-form information into the unstructured response field.

20 15. The method of Claim 14; further including the steps of:  
extracting the free-form information from the unstructured response field;  
processing the free-form information to identify trivial non-descriptive terms;  
discarding the trivial non-descriptive terms;  
comparing the remaining free-form information to the categorical descriptors of the  
25 hierarchical descriptor structure;  
identifying any remaining free-form information which matches existing categorical descriptors;  
discarding any free-form information which matches existing categorical descriptors;  
placing the remaining free-form information within the hierarchical descriptor  
30 structure; and,  
causing the hierarchical descriptor structure to grow new limbs; branches and leaves.

16. The method according to Claim 10; wherein said placing the remaining free-form information step is immediately preceded by the additional steps of:

45

transmitting the remaining free-form information to a descriptor placement engine;  
and,

organizing the remaining free-form information into a hierarchical structure.

- 5     17.     The method of Claim 9; further including the step of:  
              creating an anonymous inquiry.
18.     The method of Claim 7; further including the additional steps of:  
                      providing a means for a buyer to notify the system software module of the buyer's  
10     election to consummate a transaction with the responsive seller;  
                      causing the system software module to receive confirmation of buyer's terms and  
                      conditions of the transaction;  
                      causing the system software module to notify the responsive seller of buyer's  
                      election;  
15     providing seller with buyer's terms and conditions of the transaction;  
                      requesting seller's acknowledgment of buyer's understanding and rendition of the  
                      terms and conditions of the transaction;  
                      requesting seller's confirmation of agreement to consummate a transaction;  
                      notifying buyer of seller's confirmation;  
20     requesting buyer's agreement to consummate the transaction;  
                      debiting buyer's financial resource for the agreed price for the transaction;  
                      crediting seller's account for the agreed price of the transaction;  
                      notifying seller of the account credit; and,  
                      advising seller of his immediate obligation to deliver the transactions goods or  
25     services to buyer.
19.     The method of Claim 9; including the additional step of:  
                      creating a unique anonymous inquiry tracking number, wherein the unique  
                      anonymous inquiry tracking number is derived from the unique buyer inquiry tracking  
30     number and associated with seller's identifying information.
20.     The method of Claim 19; further including the steps of  
                      transmitting the seller response to the system software module;  
                      comparing the unique anonymous inquiry tracking number to the table of unique

46

buyer inquiry tracking numbers;

creating a message for delivery to the buyer who's unique inquiry tracking number corresponds to the seller's unique anonymous inquiry tracking number; and,  
transmitting the message containing the seller's response to the buyer.



1/16

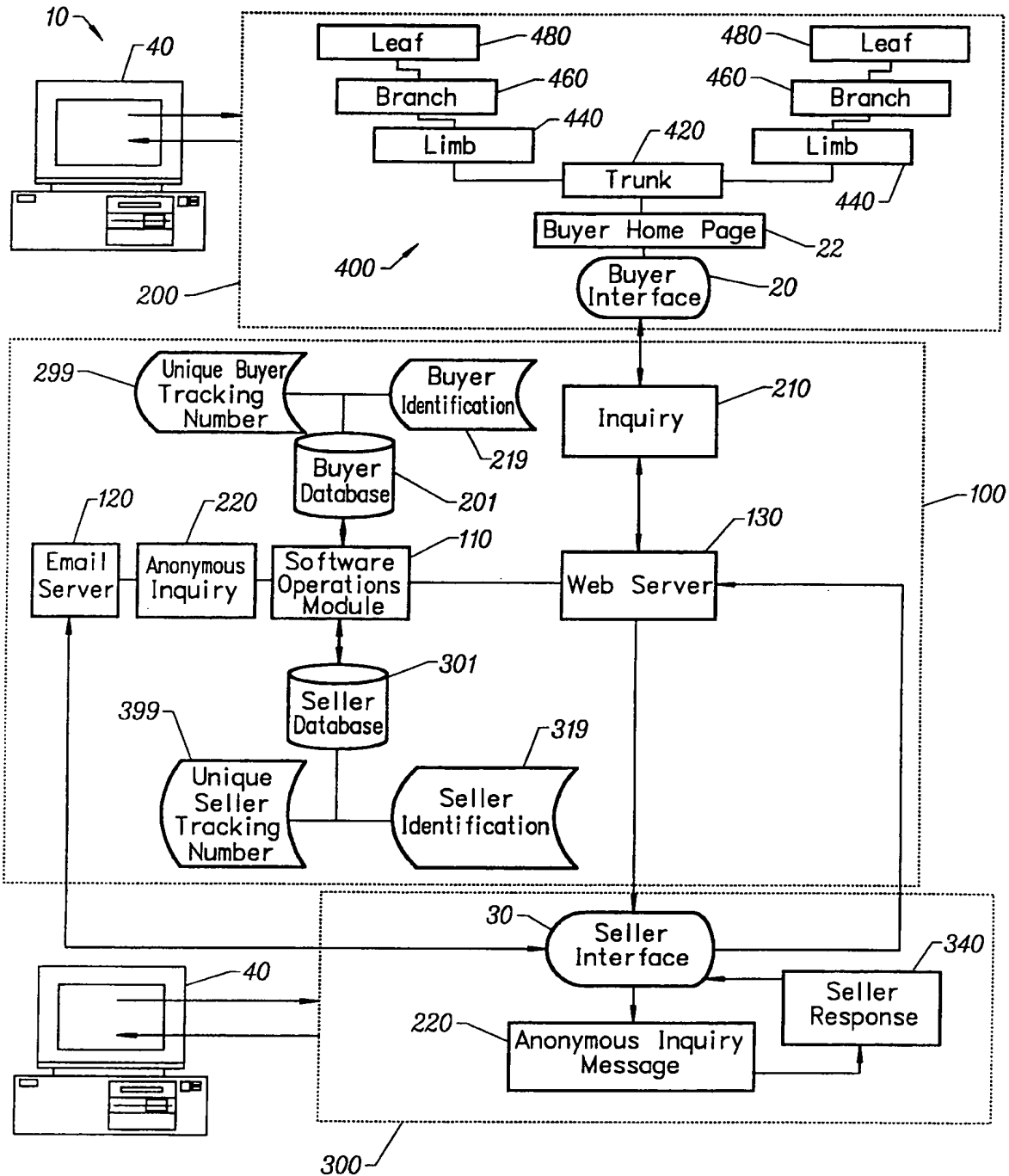


FIG. 1

2/16

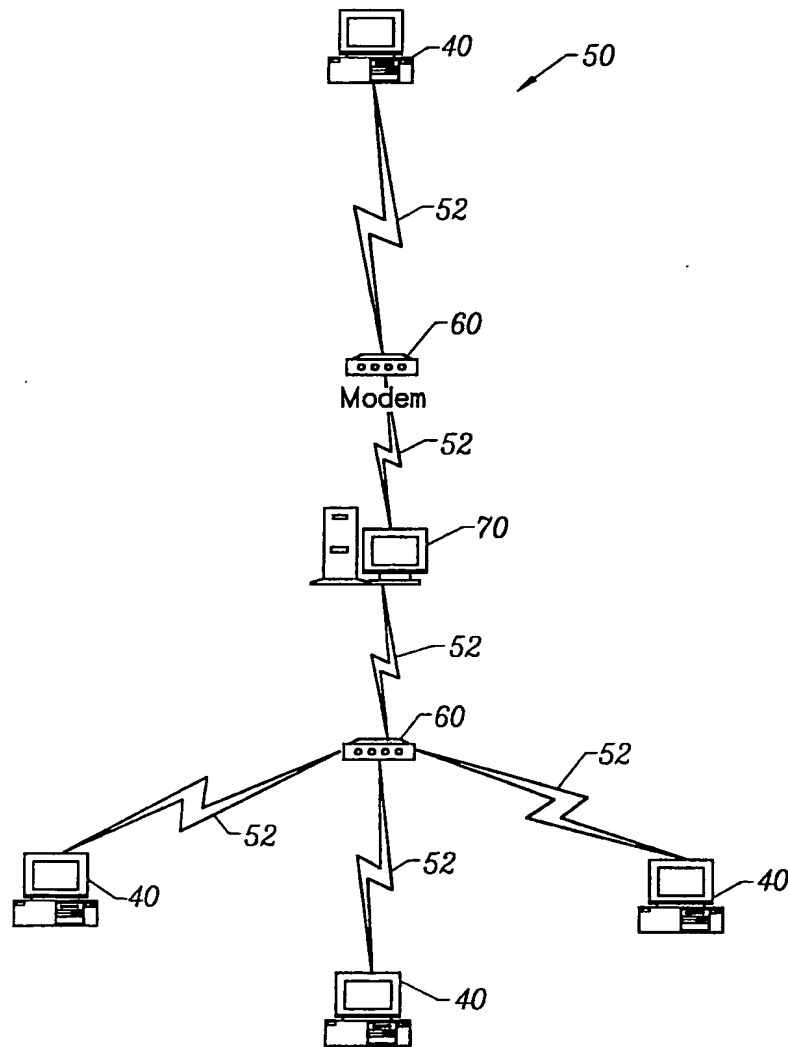


FIG. 2

3/16

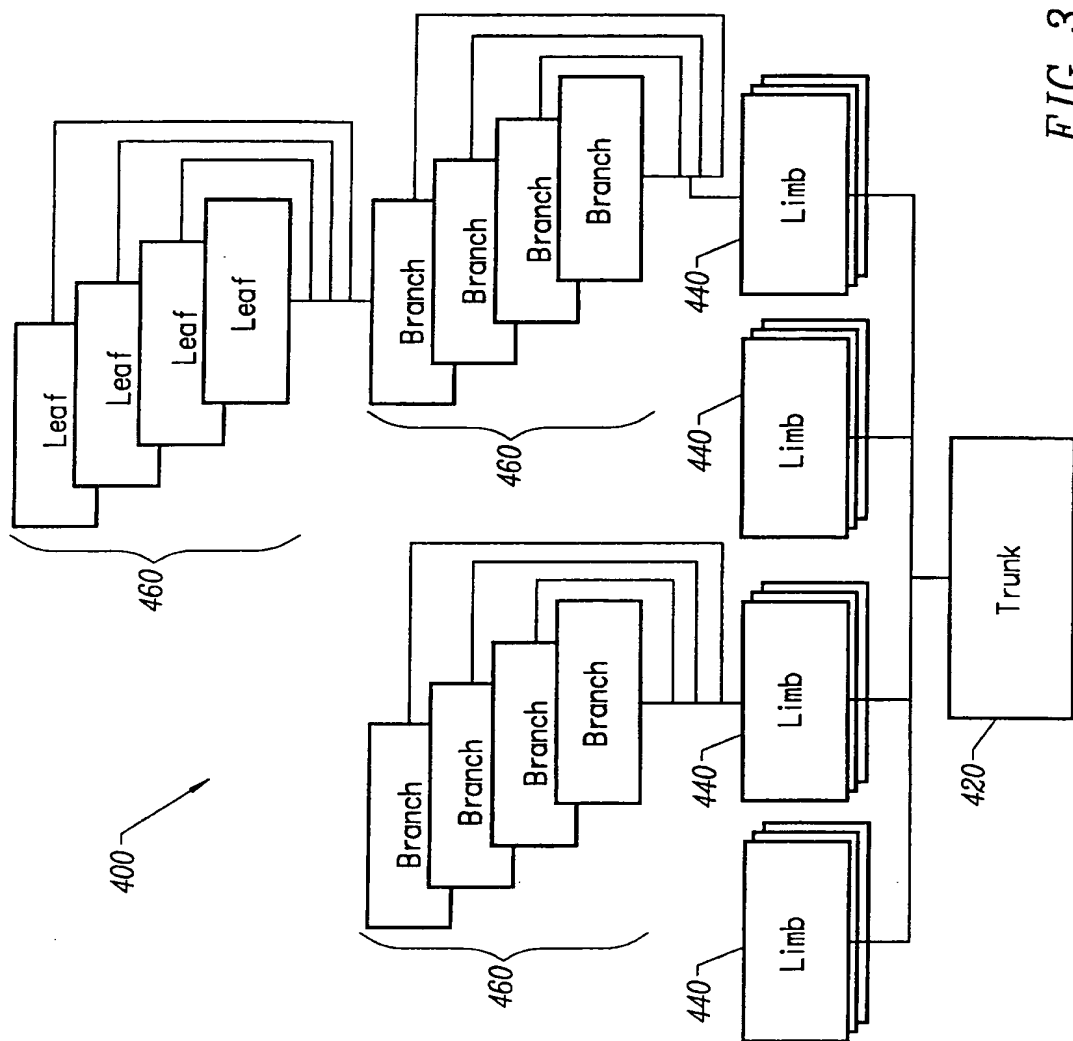


FIG. 3

4/16

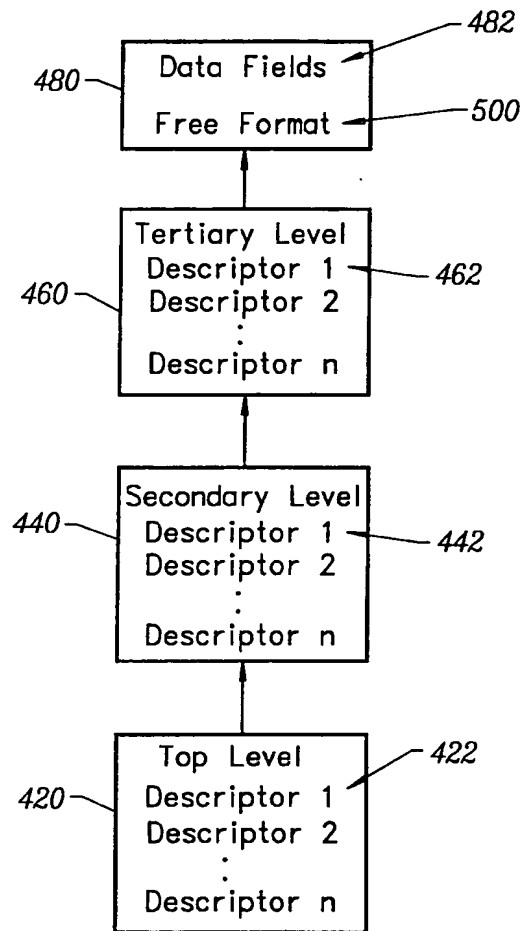


FIG. 4

5/16

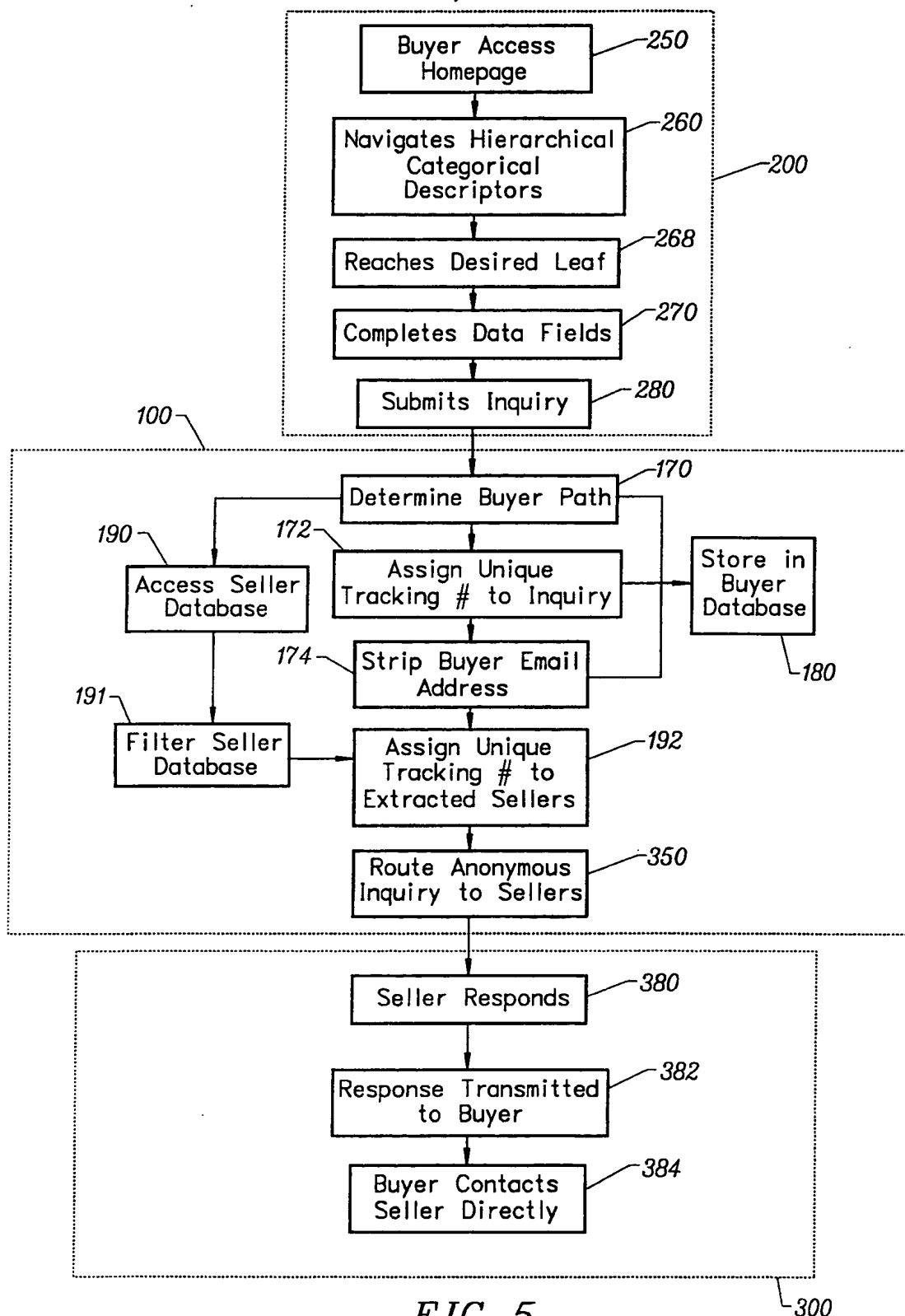


FIG. 5

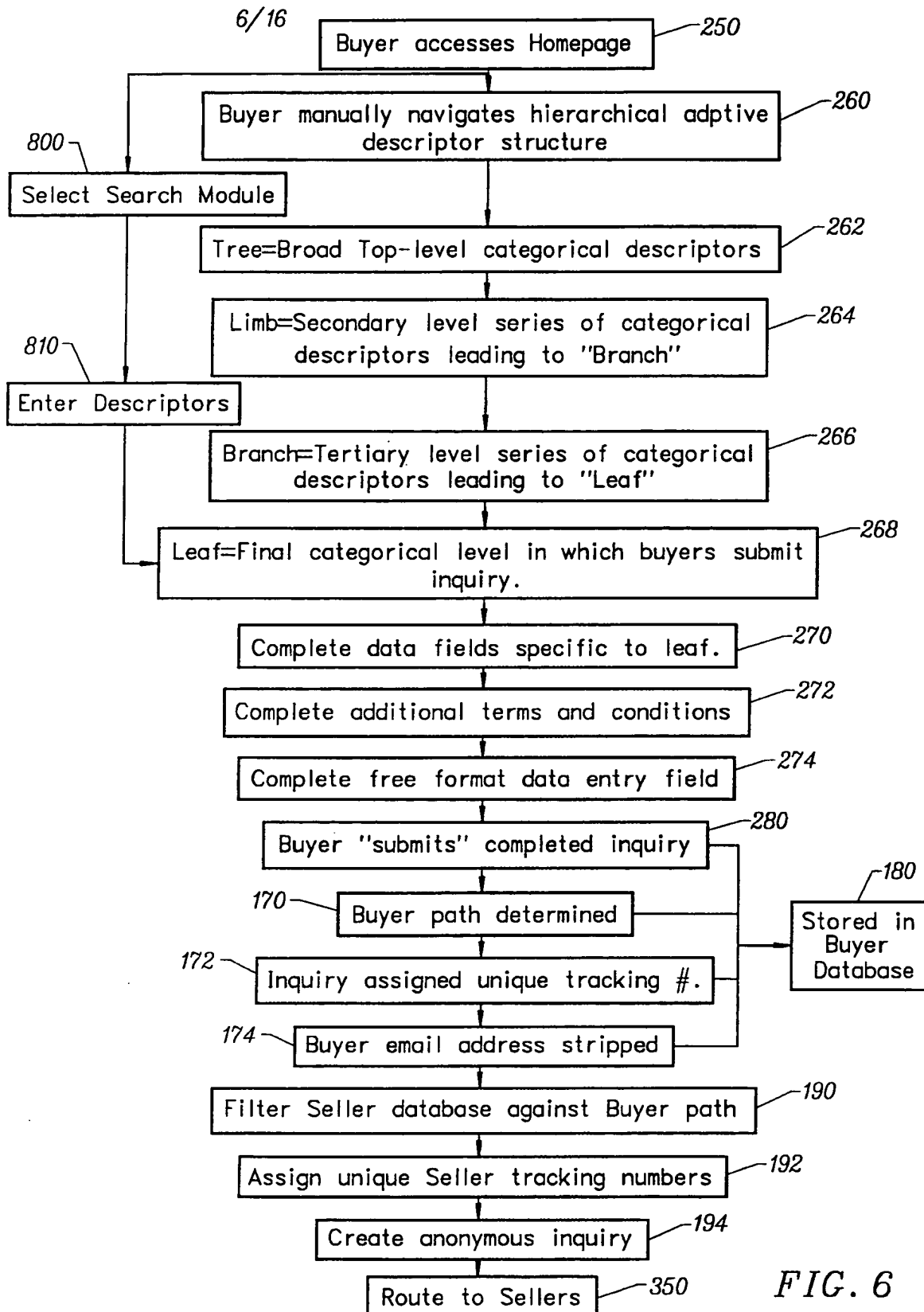
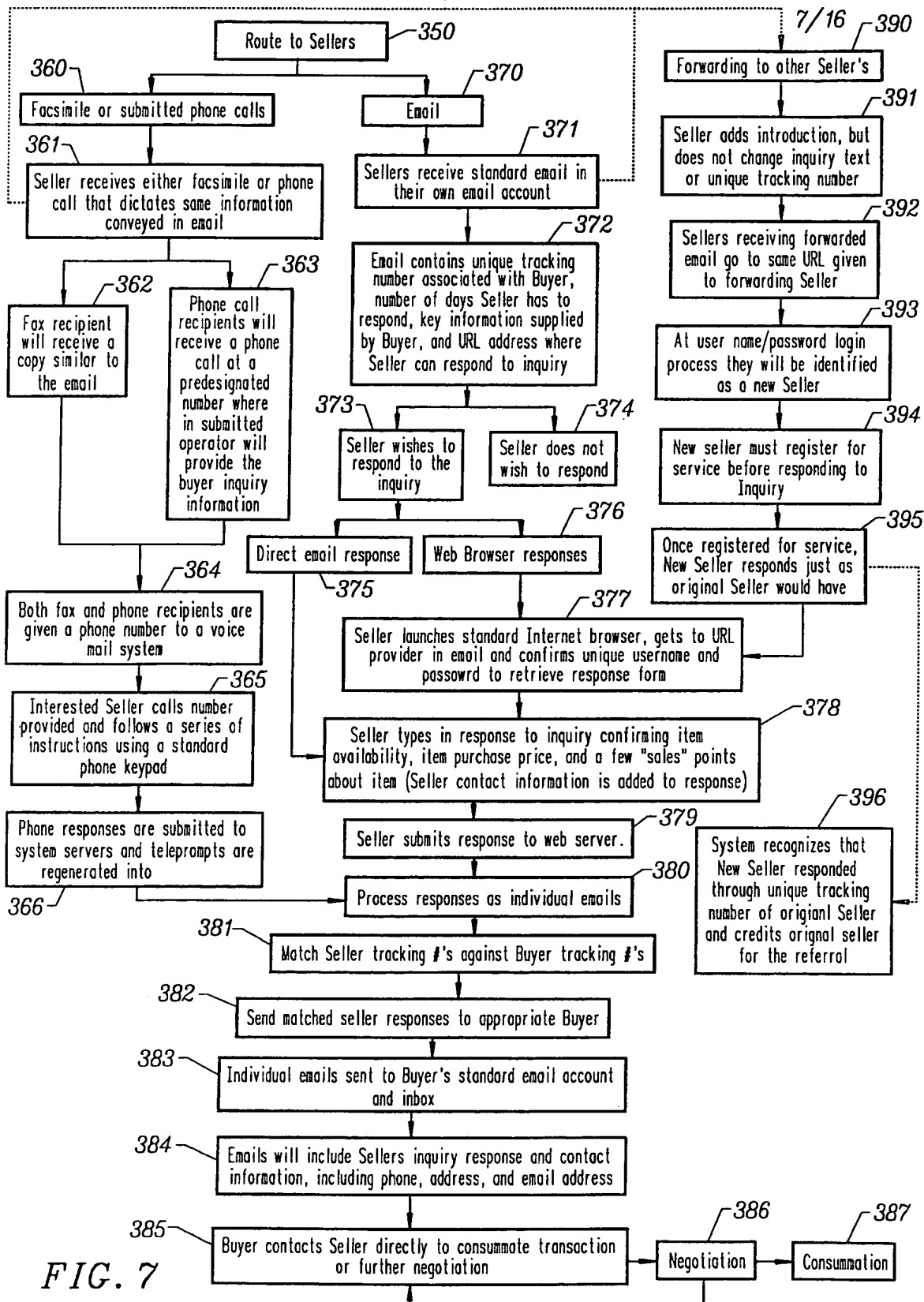


FIG. 6



8/16

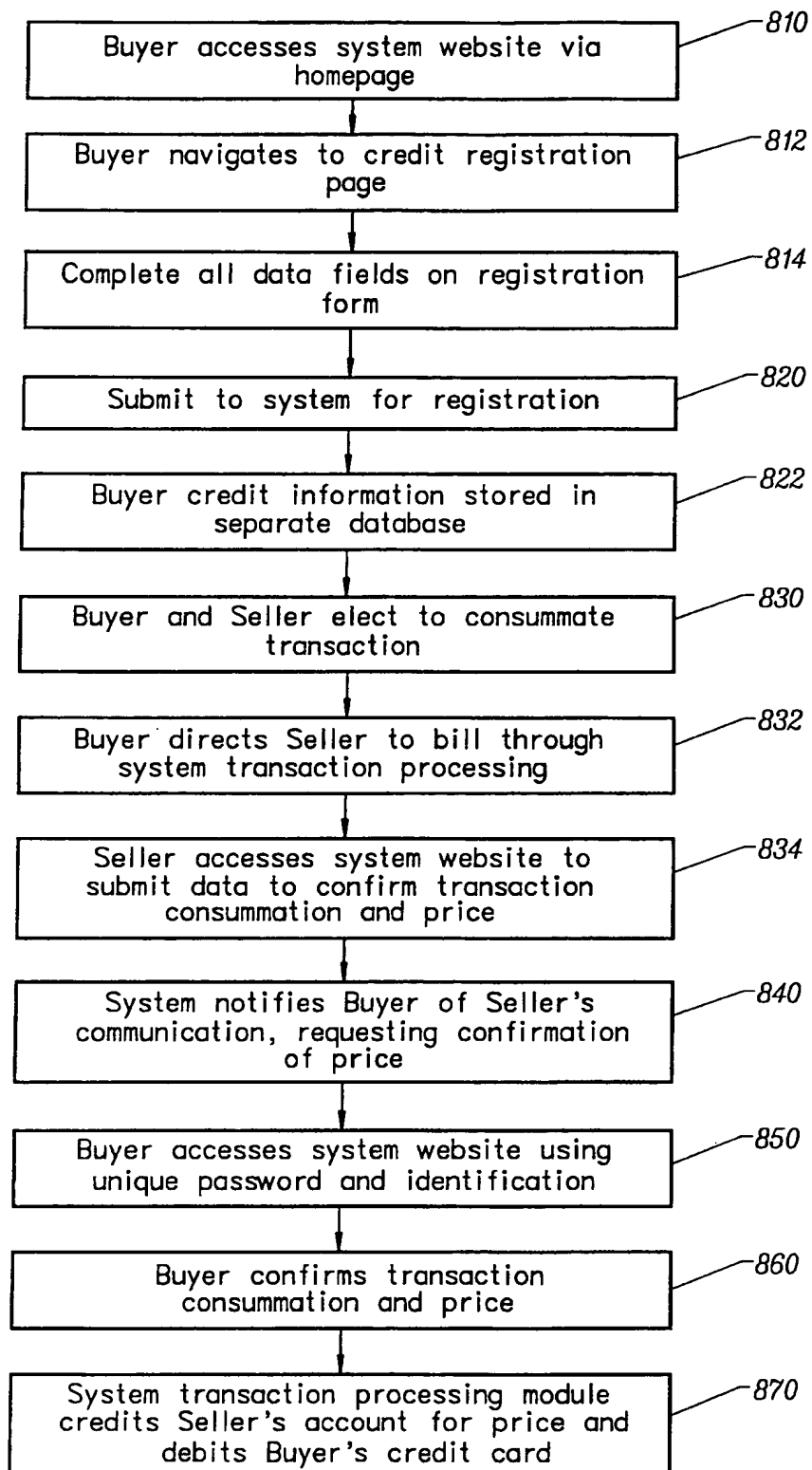


FIG. 8



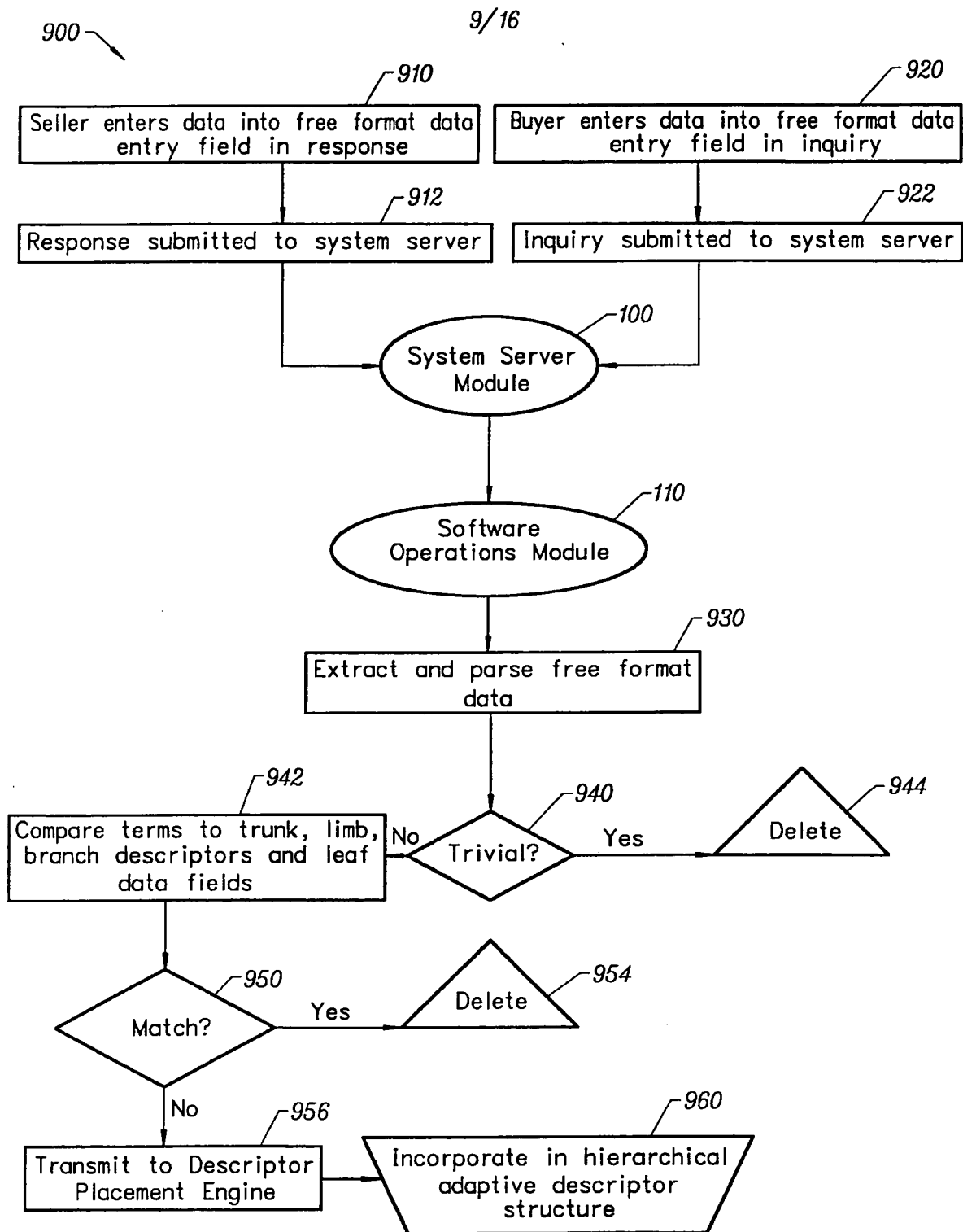


FIG. 9

10/16

420

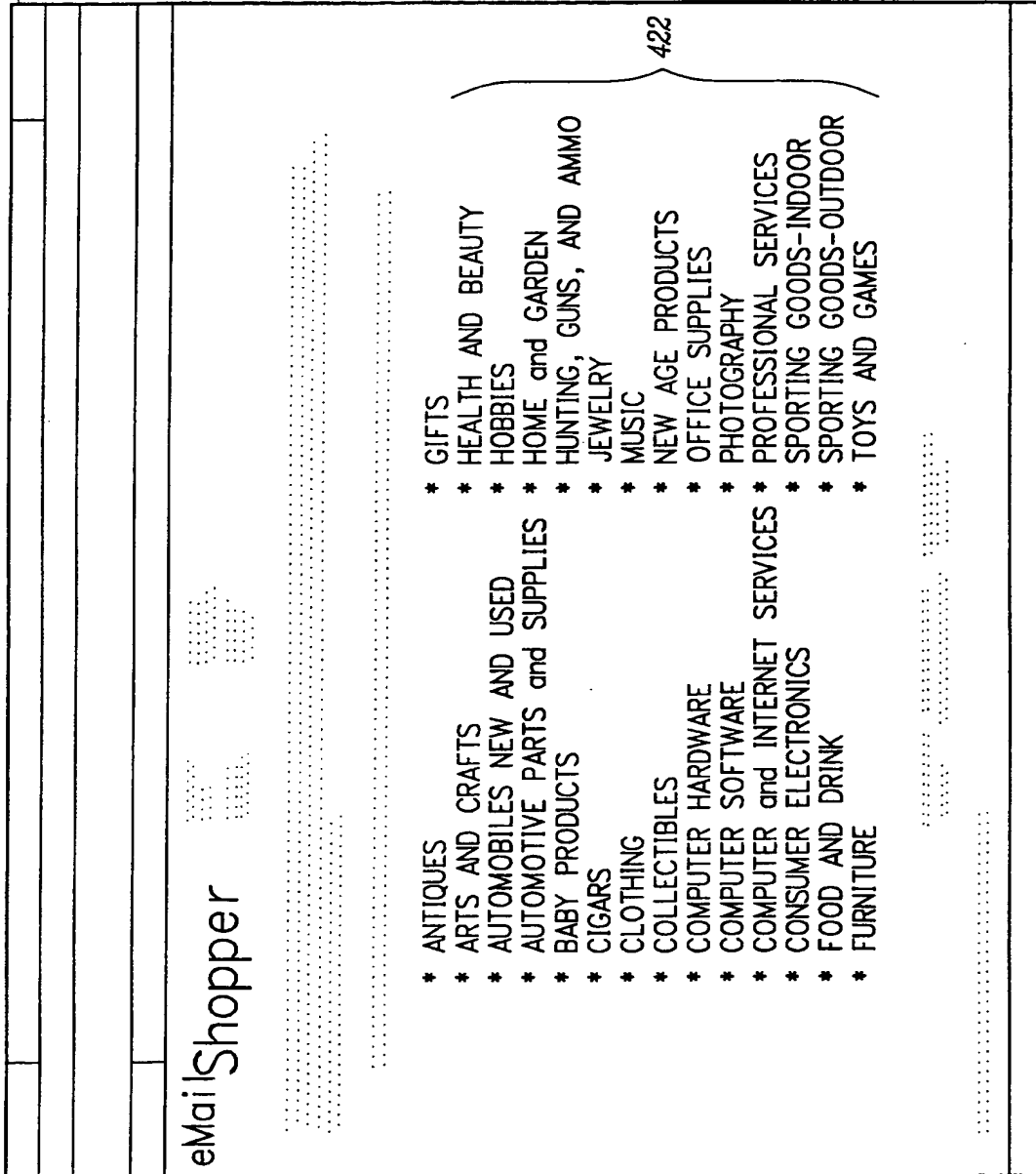


FIG. 10

11/16

440

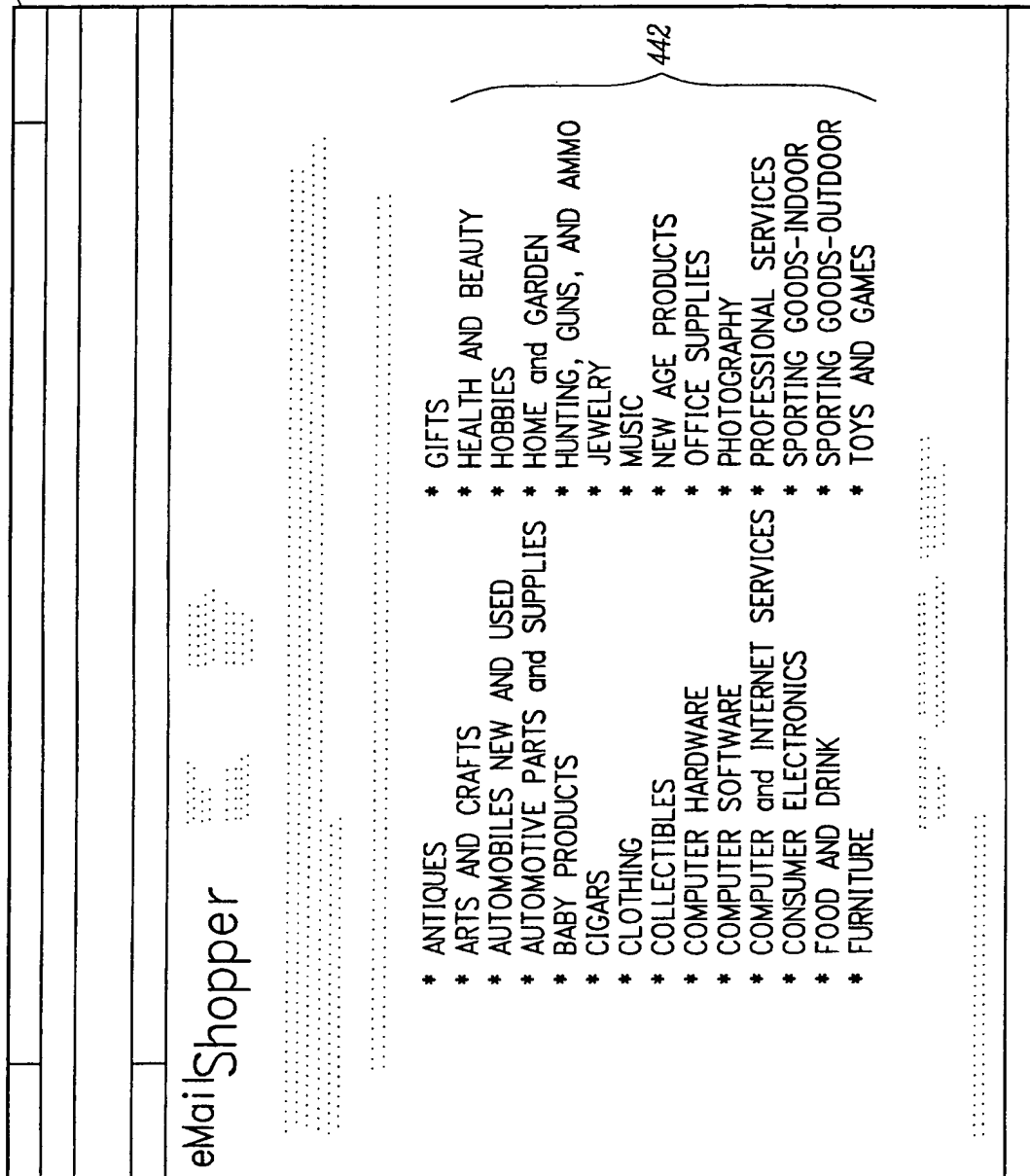


FIG. 11

12/16

460

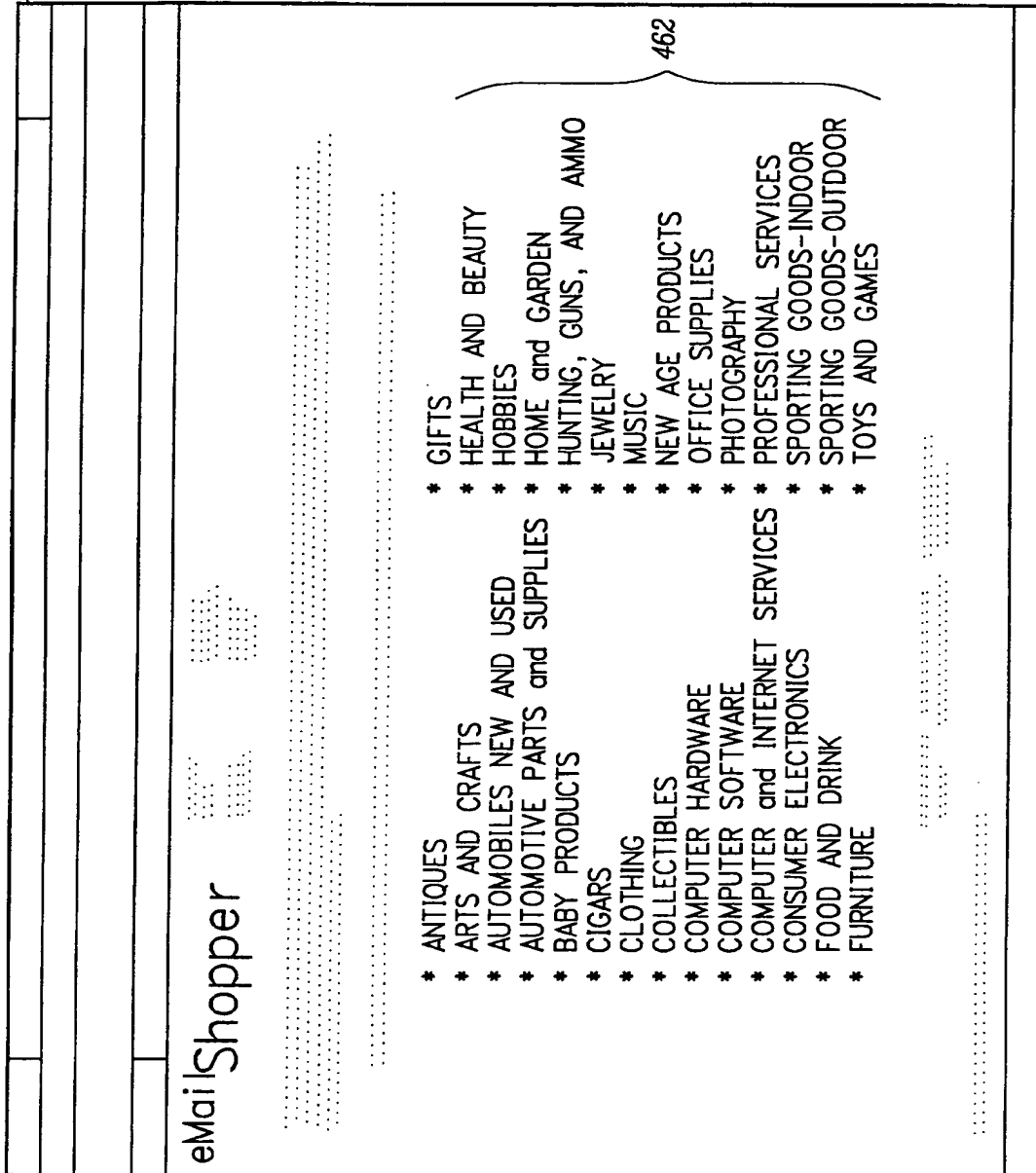


FIG. 12

13/16

480

24

482

500

eMailShopper

[Return to the Homepage](#)

Make:

Model:

Size:

Color:

Warranty:

Price Range:

Comments/Questions:

I also need the accessory pack that allows for water takeoff and landing. I am also curious have it by Friday for an event this weekend.

For how many days will you allow store to respond?  
 (required)

Email address where responses will be sent  
 (required)

FIG. 13

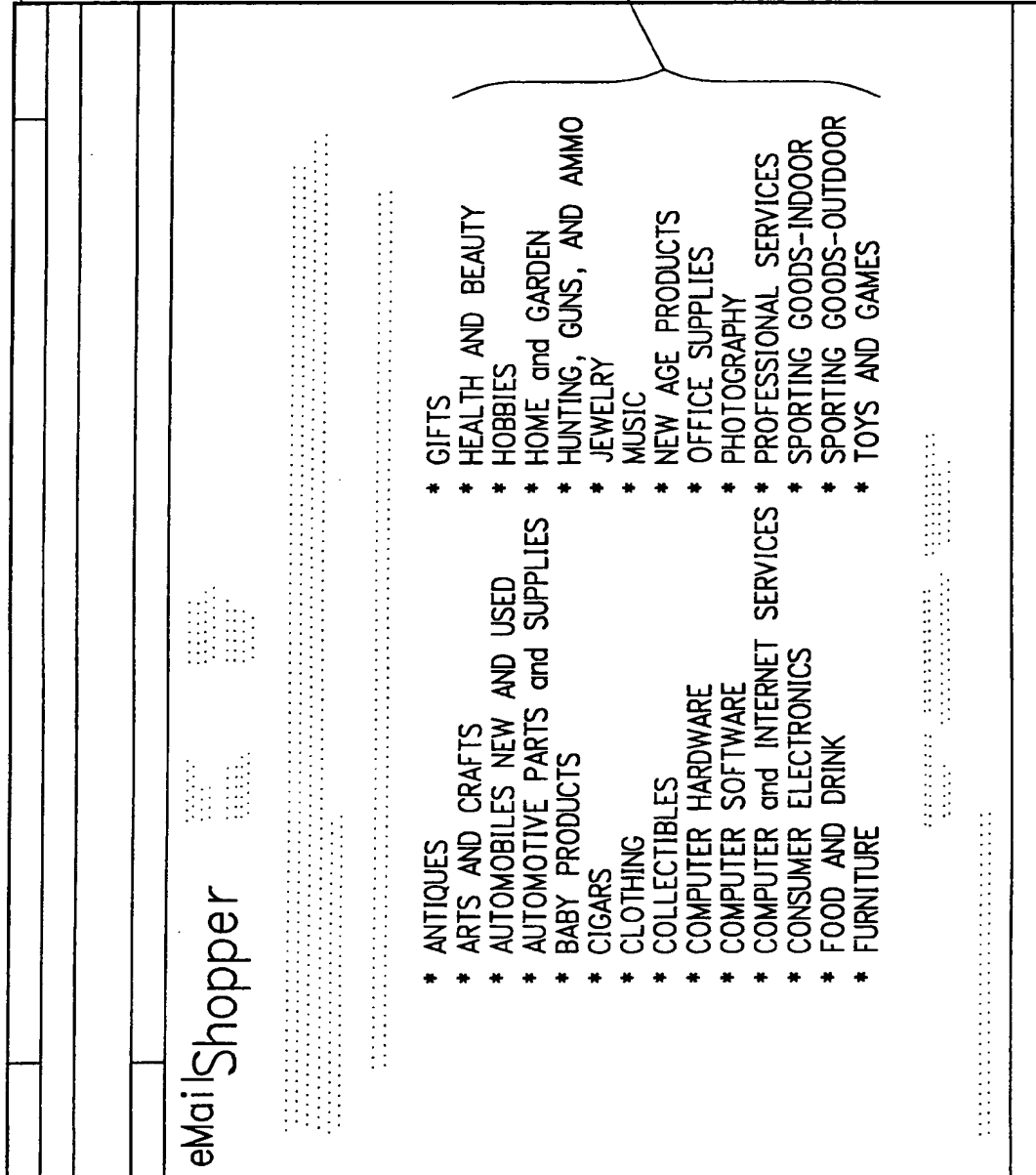
This email has been sent to you per your request,-anonymously- from the 2find system.  
Go to <http://2find.com> for a better way to shop!

15/16

310

463122

FIG. 15



16/16

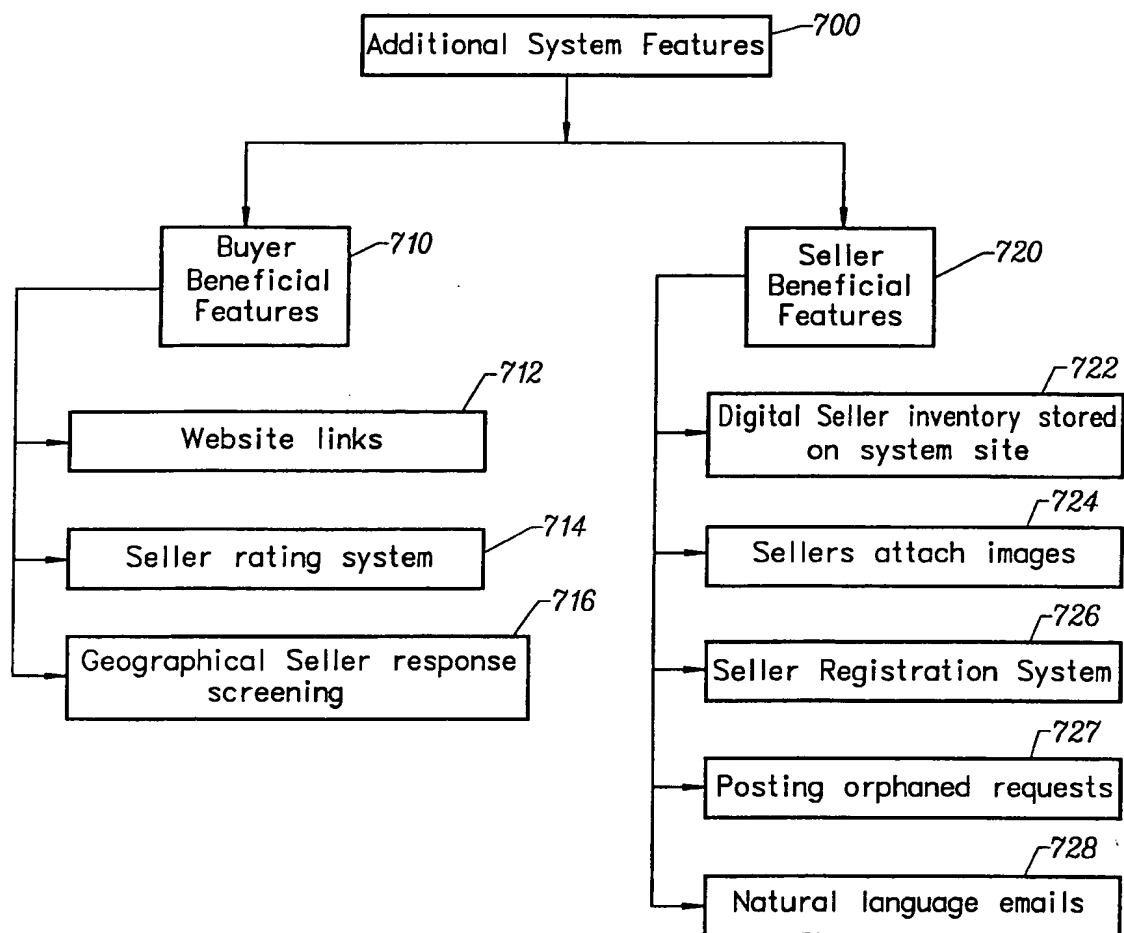


FIG. 16



**COMPUTER-IMPLEMENTED SYSTEM AND METHOD FOR INDUCING  
TARGETED SELLER OFFERS TO ANONYMOUS BUYERS**

WO0111519

ABSTRACT

The invention provides a network-based buyer-driven system and method for inducing and creating targeted offers from sellers to anonymous buyers. A buyer accesses a home page displayed by the system server. The home page provides top level access to a tree-shaped hierarchical descriptor structure whose main trunk includes broad categorical descriptors for businesses or items of interest to a buyer. As a buyer rises along the limbs and branches of the tree, the buyer is presented with more and more detailed descriptive and categorical information until the buyer has narrowed the search sufficiently to reach a specific leaf, containing a plurality of data fields which may substantially describe the item which the buyer wishes to purchase. The buyer fills in the data fields. The data is then submitted as an inquiry to the system server. A software operations module extracts the buyer's identifying information to maintain anonymity, assigns a unique tracking number to the remaining information and forwards an anonymous inquiry to interested sellers via an e-mail message or fax. Any interested seller may then provide a further expression of interest by replying to the anonymous e-mail message, which is then transmitted back to the system server. The software operations module then matches the unique tracking number of the received e-mail message with the identity of the interested buyer and causes an e-mail message containing seller information to be sent to the interested buyer. The buyer may then browse the information provided by the interested seller and elect to contact the seller for further negotiations of price, specifications, terms or conditions.

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☒ **BLACK BORDERS**
- ☒ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☒ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☒ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**